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OUR COUNTRY AND COLONIAL SUBSCRIBERS are requested to furnish any trade gossip that they may consider interesting.

Subscribers are requested to observe that, for the future, the receipt of THE CHEMIST AND DRUGGIST in a *Green Wrapper* indicates that with that number the term of subscription has expired, and that no further numbers will be sent until the same has been renewed. We issue the notice very respectfully, not that we distrust our Subscribers, but simply because we find it impossible to keep an immense subscription list like that we now have, extending to almost every town in the world, in order without an exact system like this.

Editorial Notes.

OUR offer of a prize for the best essay on "Business Habits" has produced a handsome competition, not so much in the number as in the quality of those sent in. We have read at least half of the essays with extreme pleasure, and to any of the first six we should have seen the prize awarded with the most perfect satisfaction. Three gentlemen of literary pursuits were kind enough to take the responsibility of decision from us, and with regard to the prize their award was unanimous. We believe that the rest of the competitors will be the first to admit the literary excellence and ingenious method of treatment displayed in the prize essay. The author of it is Mr. F. Baden Benger, of Manchester, and the motto under which it reached us was "Con Amore." We place second a very finished article, distinguished by the motto, "Dum Spiro Spero;" and for the honours of third place we consider that "Charity" and "Nam pol sapiens fingil fortunam sibi," tread very closely on each other, although their style of treatment is very different; "Charity," however, seems to have been finished with the greatest care, and therefore "Nam, etc.," must be content with being a good fourth. The other essays which we have to acknowledge, and among which are some of considerable ability, are distinguished as follows:—"The hand of the diligent maketh rich," "Live and let live," "Business, the world's pendulum," "Young Hopeful," "Filo," "Fortuna favet Fortibus," "Belladonna," "Tento," and "Bonâ Fide." It is necessary to remark that the last nine are named promiscuously, except "Bonâ Fide," which is undoubtedly in its proper place, that essay being plagiarized from beginning to end.

In pursuance of our plan, we have now to state that next month the "Students' Corner" will be resumed, the answers to the questions which were printed in our last number appearing. The competition for that is closed with the issue of this number. The prize of Two Guineas is next

offered for the best design of a Chemist's Window Display. The drawing must occupy not more than half a page of our space, and none will be admitted to the competition which reach us later than April 1st. Taste, effect, and novelty should be considered, and the successful design will be engraved in our April issue. Each drawing must be accompanied with a concise explanation and a motto, the real name and address to be enclosed in an envelope endorsed with the same motto. We reserve the right to withhold the prize should none be sent in which appear worthy of engraving.

IN our report of the Chemical Society's meetings, this month, will be found the record of some interesting experiments made by Dr. Frankland, and suggested by the investigations of Dr. Charles Heisch, to which we alluded in November last. Dr. Heisch found that sugar was a very delicate test for water contaminated with sewage, its addition showing in a short time, with the aid of the microscope, some very characteristic fungoid growth. Dr. Frankland has repeated and extended the experiments, and to a limit, corroborates Dr. Heisch's results. But he has found that the presence of sewage matter alone in water is not sufficient to produce this singular result. It must be accompanied by the presence of some of the phosphates. He also finds that germs from the atmosphere in company with phosphates yield similarly formed cells. The conclusion therefore is, that though sugar is not a reliable test for sewage matter, it is likely to prove a wonderfully delicate indication of the existence of phosphates. The revelations of science with regard to germ life are crowding on us with an impressiveness which amounts to awe. Dr. Tyndall has proved that the empty space through which we move teems with existence; that we cannot even raise our hand without disturbing myriads of millions of these microscopic mortals; and for the momentary amusement of a few well-dressed mortals of another species, the Professor coolly (or rather warmly for them) annihilates countless hosts of these by the flame of a spirit lamp, in order to show his audience that without them our atmosphere would reflect no light. Now, Dr. Frankland goes still further, and discovers that those same little individuals require for their nourishment food of a character chemically similar to that which is necessary for us. Fancy the processes of digestion, respiration, and assimilation taking place in a germ.

IN another part of our journal we report a sad case of poisoning, which occurred at Mossley, in Lancashire, a few weeks ago. We have been compelled to summarise the evidence very briefly, but *in extenso* it proved beyond the shadow of a doubt that the child had died from the effect of narcotic poison. The doctor could not but have been convinced, and yet to the last he maintained a doubt, which seems to have succeeded handsomely with the jury. But, to show that the public is willing to consider such affairs in an impartial manner, we quote some remarks on the inquest from the *Ashton News*. This journal, after commenting somewhat severely on the surgeon's evidence, adds: "The case was one of great interest to the public. The medical profession is rapidly developing into a monster monopoly, and, as must be the case, the incompetence of its members increases with their impunity. It may suit them and facilitate coroners to tell sorrowing parents when they discover that their children have been poisoned, that it is only a 'misadventure,' but such a solution of the difficulty is unsatisfactory; still more is any evident desire to shuffle off the responsibility of a proper and thorough investigation. If the

father of the child in question had not been a chemist, who would have heard more about it? If he had made up a doctor's prescription with fatal results to another man's child what would have been done to him? What did the surgeon say his patient died of in the certificate he granted? Is the story more than half told yet?"

ANALYTICAL chemistry is a comparatively modern pursuit, and its professors can only claim a reasonable right of existence under the conditions of civilised society. Adulteration is not practised among savages; and if it were the chemist who should be bold enough to expose the fraud would enjoy a fair prospect of being roasted in his own crucibles. The pursuit of science under such unpropitious circumstances as these is not tempting, and thus it comes to pass that neither among the noble savages of the present day nor, as far as we have any record, among the equally unamiable nations of antiquity was the profession of analytical chemistry carried on. But in England in the present generation a much milder form of courage is necessary to attack and expose the grocers, bakers, and confectioners, wine-dealers, and provision merchants generally, whose amusement seems to consist in gathering together all the poisonous refuse of creation for the purpose of rendering short and miserable the lives of their unhappy fellow-creatures. It is generally supposed that for the exposure of such practices the world owes a deep debt of gratitude to analytical chemists. So be it; it is not our purpose to dispute the claim. But, suppose a time should come when all adulterations shall be done away with; when roguery shall be so dangerous that it will be no longer safe to practise it; and when poisoning, either by slow or prompt processes, will be so certain of detection as to spoil the whole interest of the experiment? Will not such a state of things be almost as bad for the analytical chemists as the primitive condition to which we have before referred? They must live; at least *they* will probably think so, and it is to be feared that for them, as for Dr. Watts' little busy bee, Satan will find some mischief still for their idle hands to do.

This may not occur in its fulness for another generation or two, but meanwhile we have opportunities presented to us even now to judge of what may be expected to happen when the prospect we have indicated shall be perfected. We shall ask attention to one instance which has just come before us. The *Practitioner* is a monthly medical magazine, which aims to represent the highest class of the profession. It has endeavoured to carry out this programme, partly by charging a high price, and partly by getting respectable writers on its staff. It sometimes contains good articles, but not always, and it is in fact very much like the rest of us,—a mixture of good, bad, and indifferent. But its editor has recently resolved to keep an analyst; and having gratified his wish and got one, it became a matter of urgent necessity to provide him with some nourishment. The analyst would doubtless have preferred a nice tender rogue, which was his natural food, but this not being available at the moment, it was thought advisable to throw a rather tough honest man to him. "The gods were athirst," and therefore the blood of the first man who came in the editor's path had to be shed. The victim chanced to be Mr. A. B. Condy. Without making the smallest pretence of serving any good purpose, analyses of his preparation of the permanganates were published in the *Practitioner*, with comments on his business, which were somewhat out of place in a high-class professional journal. This may be passed over, however, for the present. A more interesting question at this stage now arises. The analyst

(who, we afterwards learn, was Dr. Dupré, a chemist of fair reputation) asserted that Condy's ozonised water was a solution of permanganate of potash with a little permanganate of soda; that it was in fact chemically the same as the red fluid. Mr. Condy wrote to the editor, stating that his ozonised water was a solution of permanganate of another salt, afterwards informing him of the exact composition, namely, that it was a solution of permanganate of lime. Several letters were interchanged and shortly the whole of the correspondence will be published. We can promise those of our readers who peruse it, a real treat. Speaking purely from a critical point of view, there will be no difference of opinion, we think, as to where the victory lies. Mr. Condy puts Dr. Anstie and his colleague into an unmistakeable quandary. They stoutly maintain the correctness of the analysis; but, wonderful to relate, on a second examination made after the composition of the ozonised water had been revealed to them, they do find some lime in it. They account for this by supposing that the samples have varied! Reluctantly the reader wavers in his faith in the infallibility of chemical analysts after this, and in this case is more inclined to trust the synthetical statement. There are many other points of interest in the correspondence, the perusal of which we are fiendish enough to admit has given us much enjoyment; but we must not detail any more at present, as we do not wish to spoil the charm of it when it comes before the world in its completeness.

All chemists and most medical men are well aware that by his investigations into the value of the permanganates as disinfectants and medicinal agents, Mr. Condy has well deserved the honourable scientific reputation which has been accorded to him. By business talent and energy, and by liberal expenditure afterwards, he has popularised his discoveries, and made the salts accessible to others. He is entitled to whatever rewards he may have gained, and at least might expect fair and polite treatment, most of all from physicians. We are bound to say—for the whole of the correspondence has been submitted to us—that from the editor of the *Practitioner* he has not received this.

THE Pharmaceutical Council has published a long, prosy, and not very grammatical explanation of its action with regard to the poison regulations. Such a course was wholly uncalled for, and will decidedly weaken the influence of the Council with the members. There is no sort of reason why any individual member of the society should not thus bring forward, in the columns of the *Pharmaceutical Journal*, the thoughts of his head upon this or any other subject; but why these reflections should be issued as the manifesto of the Council, is more than we can understand. When Jupiter used to speak, it was always in a voice of thunder; and he was respected in consequence. If the Council is doing right, why do they want to apologise? They seem terribly afraid of having their motives misconstrued. Why, then, do they not act as other intelligent bodies do, and ask the editors of the various pharmaceutical journals if they will be kind enough to send reporters to their meetings, to save them the degradation of having to take a step such as this? The Council appears to be in a fright about something, but, like the old woman and the cow, has sufficient reason left to know that it may still hope for victory if it can only succeed in frightening its opponents. The Council has resolved to send a copy of this address to every member of the Pharmaceutical Society, and we presume to them alone. They have perfect right to select from the body of chemists and druggists a few to favour thus. In this instance, we congratulate the remainder, who are spared the

infliction. But, in thus treating with courtesy the large majority of the trade, the Council is taking a step which will arouse old jealousies, and clog the wheel of progress, and which hardly justifies the confidence that has been reposed in its judgment and liberality. This sort of action will strengthen the hands of those who, as will be seen from our advertisement pages, are organising a special opposition to the poison regulations. We should add that the immediate occasion of this circular was a recommendation from the Lords of Her Majesty's Council, that regulations respecting the dispensing of poisons should be added to those for storing them, which, as we announced, had been recently suggested by the Council of the Pharmaceutical Society.

IT is not too early to call attention to a sentence in the "Year Book of Pharmacy," which, we believe, the leaders of the British Pharmaceutical Conference will be glad to see thus prominently put forward. The editor quotes a resolution passed at the meeting of the American Pharmaceutical Association, at Chicago, in 1869, which ran thus :—

"Whereas, the custom of giving expensive entertainments to visiting members by those residing at the place of meeting is at once onerous to the latter and detrimental to the interests of this Association; it is therefore resolved, that the local secretary be instructed that the members of this Association neither expect nor desire any special entertainment at the hands of the Baltimore members during our meeting there in 1870."

This so exactly coincides with what has been felt in many quarters in connection with our own Conference, that we are glad to see an editorial remark appended to the quotation in the "Year Book" as follows :—

"This resolution fully expresses the sentiments of the fraternity in England. Unless this course be adopted in the infancy of the Conference, that institution runs a perilous chance of never reaching manhood."

We imagine no one wishes to contract the pleasant social intercourse which these gatherings have inaugurated, but it is a pardonable delicacy of feeling which actuates those who are invariably visitors, and who, while they value extremely the manifestations of good feeling which so universally greets them, would rejoice to feel themselves rather less burdensome than they have been heretofore.

TIME was, and it is not very distant either, that public opinion accepted the belief, and had good foundation for it, that business talents and scientific acquirements were nearly, if not quite, incompatible. To aid the illusion, the votaries of science cultivated as far as possible a complete ignorance of things commercial, were proud in such matters to display themselves as pure muffs, which they often were, and generally they obtained their appropriate reward. On the other hand, business men, and very successful business men too, were apt to boast of their ignorance of, indifference to, and even contempt for, the new-fangled discoveries which seemed to them to serve no practical purpose. This state of things has undergone a vast change within the last twenty or thirty years. Business men have made handsome fortunes by recognising and developing scientific theories; and scientific men have seen the importance of following out their abstract ideas to such an extent as to make them useful and profitable as well as ornamental. So far, good. We have repeated a few platitudes which, in one form of words or another, is the everlasting theme of many of our scientific contemporaries. But now we are going to make a new track. We admit and appreciate the value of the result which has been indicated, as much as

anyone, but think that some little consideration is due to the manner whereby this result is obtained. Some years ago it was all done by levelling up business, now the usual course is to level down science, and we are very sorry to add that this levelling-down process is continually becoming more and more discreditable to those who stoop to it. There is no disgrace whatever in a business man studying science in the hope that he may thus become more successful in his commercial pursuits. Neither ought it to be regarded as beneath the dignity of a scientific investigator who may be fortunate enough to hit on a discovery which is just what the world wants, if he should patent his process and go into competition with other traders. Rather would we applaud both. But we do complain, and we have reason for it, when men of scientific reputation write articles and conduct discussions, throwing over their essays, on purpose to mislead careless readers, the glamour of appearing to be earnest in their investigation of truth, while all the time the article, with their signature attached, is only a cleverly written advertisement of some preparation or manufacture in which they are interested. There is just now a public need that some impartial scientific experimenter should thoroughly investigate the value of the numberless disinfectant preparations which are before the public. But first of all we want a process that will fairly estimate this value. With many thanks to the proprietors of one or other of the preparations, however, we do not care to adopt just the tests which they may invent, and which, although we are quite willing to believe are suggested in perfect good faith, lead always, curiously enough, to this result, that A's process proves A's to be the best preparation, while B's test gives a corresponding result as far as B's invention goes; C, D, and all the rest, waking up, one by one, to the importance of thus instructing the public, contrive processes of experiment ingenious and marvellous in their results, leading in each case to a new conclusion. These remarks are not uncalled for, as anyone will admit who has followed the scientific and medical literature of the past few months. Articles have been flying about, with names of weight attached, which look like investigations, but are in reality only puffs. This may be smart; we are not quite sure of that, but it is not scientific, nor is it business-like. The proper place for those effusions is the advertisement department, or—the waste-paper basket.

A very largely attended *conversazione* was held at the London Institution on the evening of January 25th, when Professor Tyndall re-delivered his eloquent lecture on "Dust and Disease," repeating his brilliant experiments, and introducing some remarkable corroborations of his recent investigations. Dr. Tyndall does not believe in the theory of spontaneous generation, and his experiments and illustrations seem wonderfully conclusive. In a masterly manner he showed the fallacy of certain arguments of Dr. Bennett, particularly with regard to some indications of life which the latter had found to exist in a solution which had been boiled in a vessel, and in which, according to Dr. Bennett, the air had been so rarefied as not to permit the possibility of germ life. Dr. Tyndall pointed out that the air was in fact less rarefied than that which he himself was accustomed to breathe among the Swiss mountains, for some portion of every year. Some remarkable evidences of the value of preserving wounds from contact with air, as explained by Professor Listor, of Edinburgh, were advanced. Professor Tyndall has recently constructed a large metallic respirator, the internal arrangements of which consist of layers of cotton wool soaked in glycerine, small fragments of caustic lime and charcoal, by the use of which, it is possible to

breathe with comfort in an otherwise choking atmosphere. Experiments had been made with this not only by the Professor himself, but also by Captain Shaw, and other members of the London Fire Brigade, who found themselves quite at ease for hours in an atmosphere which it would not otherwise have been possible for them to breathe in for so many minutes.

DR. GRACE CALVERT has commenced the delivery of the second course of Cantor Lectures in connection with the Society of Arts for this season, the subject chosen for treatment being "Dyes and Dye-stuffs other than Aniline." The course consists of four lectures, two of which, on "Red Colouring Substances," have already been delivered; the third will treat of blue, and the fourth of yellow and black colouring substances. Dr. Calvert's intimate acquaintance with the application of dyes to cotton goods adds a practical interest to the scientific information which his lectures convey.

PROFESSOR FRANKLAND has accepted the honourable position of President of the Chemical Society for next year. Professor Williamson holds the office at present.

MR. JOSEPH INCE, of London, has been elected an honorary member of the Chicago College of Pharmacy, "in consideration and appreciation of his valuable labour to promote the advancement of scientific pharmacy, and the zealous devotion of years to the cause of pharmaceutical education."

THE Pharmaceutical Society having exhausted its supply of subjects strictly connected with its existence, is now entering upon new fields. Two evenings have been recently occupied with most interesting discussions on American affairs, which, however, it must be admitted, were tolerably well confined to things pharmaceutical. At the last evening meeting, Dr. Carpenter delivered a valuable lecture "On the Microscope and its Revelations," the report of which occupies nearly nine pages of a recent number of the official journal. Dr. Carpenter will give a second lecture on the same subject at the March meeting of the Society. There will be one more available evening this session, at which it is hoped the Society will give its serious attention to the Alabama claims.

THE statement that Americans adulterate golden syrup with, or sometimes wholly substitute for it, a chemical preparation made from sulphuric acid and starch, seems to be generally admitted. A test for this has been going the rounds of the American papers, on the authority of "John H. Pope, druggist, of New Orleans," which is so singularly erroneous as to lead one to suppose that John H. Pope is very new to chemistry, and that his studies have confused him. He suggests the addition of a little tannin to a solution of the suspected syrup, when if it be spurious, he says, it will turn black as ink. Professor Chandler, in the *American Chemist*, has exposed the fallacy of this test, which, as he points out, is simply a test for iron, an impurity more likely to occur in the genuine than in the spurious article. But the most curious thing of all is that Mr. John H. Pope's test is reproduced in our usually reliable contemporary the *Food Journal*.

SEVERAL law cases of considerable interest to our readers have been reported since our last issue. Once more Mr. Betts, who has almost earned the title of the Evergreen for his persistence in a worthless case, brings his action against Mr. Wilmott nominally, but actually against a multitude of tradesmen, chemists especially for the alleged infringement

of his patent rights in the matter of his capsules. This time the action was brought before the Lord Chancellor in the form of an appeal from the Vice-Chancellor's judgment, which we fully reported about six months ago. We give a report elsewhere. Here we need only quote two sentences from the Lord Chancellor's remarks, which show how distinctly the ease of the tradesmen presented itself to his mind. "The Lord Chancellor, without calling on the defendant's counsel, said the case was free from doubt. . . . The appeal must be dismissed with costs." There is one more possibility of a chance for the plaintiff by carrying the case to the House of Lords, and though it appears to be the Bank of England to a blackberry against him, we shall not be surprised to hear of Mr. Betts turning this last stone. Why do not his parents, guardians, or some relatives or friends interfere? Seldom has a case so hopeless been so doggedly carried on. Possibly, however, we have heard the last of it. If so, it is only fair that the trade should remember how much they owe their successful defence to the energy and skill of Mr. Rimmel, who so thoroughly exposed the untrustworthiness of the ground of action.

The ease of *Lazenby v. White* was a more personal one, but it is interesting because it concerns one of the most familiar of old acquaintances, "Harvey's Sauce." The importance of the decision to the owners of proprietary articles, too, is very great. It shows very clearly that the Court of Chancery is perfectly decided to protect the rights of manufacturers of specialities in the spirit of the law, it being of course evident that the interests of the manufacturers and of the public are in such cases coincident.

We also report the trial of a "coach," named Charles Gerard, not unknown, we believe, to a few pharmaceutical students, who was committed for trial, charged with having incited Epaphroditus Eatley, a proof-puller, to let him have, or in other words to steal for him, some forthcoming examination papers of the Apothecaries' Hall. Epaphroditus was fortunately incorrigible, and therefore the discoverer of a royal road to learning found his design frustrated. His counsel relies for a defence on the chivalry of his, the coach's, motives. Out of pity for an unfortunate student whose whole future prospects were likely to be blighted unless he could pass the next examination, Gerard had resolved to sacrifice his conscience. The *Medical Times* states that the College of Surgeons has adopted a system whereby such a fraud as this is rendered impossible. The questions are written by one of the officers of the College on lithographic paper; they are then taken, by the same officer, to the lithographer, where they are printed from a stone in his presence, and the stone is then cleaned. The copies are, therefore, never in the hands of the lithographer, but as they come from the stone they are received, one by one, by the College official. Such a precaution would be hardly necessary on the part of the Pharmaceutical Council, as their students would doubtless scorn to take advantage of any such opportunity. Nevertheless, it would be very proper for all examining boards to adopt some such system.

A GREAT number of business men have a sort of vague belief that the registration of a trade-mark at Stationers' Hall is a proceeding essential to legal security. Enquiries have been put to us on more than one occasion respecting this, and we have made investigation into the law of the case without having been able to discover the smallest fraction of tangible advantage resulting from the process. Some persons may regard it as worth the five shillings demanded of them, to be able to say that their label is "registered at Stationers' Hall." If they do so regard it, by all means let them pay the money and take what they get for it. But as

a matter of fact, they will find if they should ever get into a law-suit about their trade-mark no question will be asked, nor any consideration paid to the fact that they have or have not so registered it. We have for the last two years, in our Almanac, quoted an extract from a judgment of Vice-Chancellor Malins, which so exactly defines the aspect in which the law regards trade-marks that we reproduce it here. "The principles of law applicable to the subject," he said, "might be stated thus—that every person who uses a trade-mark, whether upon a bottle of soda-water or as the name of a periodical publication, by the actual user of the name (for the intended user was not sufficient) acquired a property in that name, and had a right to prevent any other person from using it in such a way as would lead the public to believe they were purchasing one thing when in truth they were purchasing another." It is evident from this that the mere registration of a trade-mark at Stationers' Hall or anywhere else does not give any special right of exclusive possession; and it is also evident from the cases of infringement of trade-mark right which are constantly being reported, that the precedence of actual public employment is the only question inquired into. The Act of Parliament whereby the Stationers' Hall claims the above-mentioned fee for registration, is entitled "An Act to Amend the Law of Copyright" (5 and 6 Vict., cap. 45). This Act refers exclusively to the copyright of "books" and "dramatic pieces," and it defines the word "book" to "mean and include every volume, part, or division of a volume, pamphlet, sheet of letter-press, sheet of music, map, chart, or plan, separately published." To bring a trade-mark under this category would require the ingenuity of a Philadelphia lawyer; but, supposing that to be possible, the Act effectually disposes of the connection in the next clause, wherein the benefit of literary copyright is defined to expire in forty-two years at the utmost. The fact of having used a trade-mark for that period or more would be looked upon, we imagine, as very cogent evidence in favour of its owner against any who might infringe it. But if a trade-mark is a "book" as far as legal rights go, a defendant, in the case we have supposed, might plead that the plaintiff, having used his trade-mark for forty-two years, was no longer entitled to protection.

The Stationers' Company will, no doubt, thank us for thus placing the matter on a right footing. They say they are compelled to register when any person brings them a form properly filled up and at the same time presents the fee; but it must be painful to them, as it would be to every one of right feeling, to be thus compelled to accept money without giving in return exactly that *quid pro quo* which the purchaser thinks he is to receive.

COMPARATIVELY few persons are aware, so completely has the war eclipsed every other subject, that a grand International Exhibition will take place in London this year. A very handsome range of buildings has been erected at South Kensington for the purpose, and the Exhibition will be opened on the 1st of next May. These buildings are capable of accomodating, in addition to the exhibits, 50,000 persons, and they are of a permanent character. Notwithstanding the war, France will be a large contributor, and the French Commission have built an annexe of their own at a cost of about £80,000. The buildings are now finished, and the Commissioners have begun to receive the various articles for exhibition, which must all be delivered before the end of February. H.R.H. the Prince of Wales is the President of her Majesty's Commissioners for the Exhibition; Messrs. Spiers and Pond are to be the refreshment contractors; Messrs. Chaplin and Horne the carriers; and her Majesty's Commissioners have arranged for the printing and publica-

tion of the official catalogues with Messrs. J. M. Johnson and Sons, of Castle-street, Holborn, London. The object of the Commissioners in holding the Exhibition may be summed up as follows:—They propose, in the first place, to make an International Exhibition a permanent institution of the country, giving to industrial art the same opportunity that is afforded to fine art by the annual exhibitions of the Royal Academy. In the second place, they propose to spread the various industries into groups, and taking certain of these each year, bringing the entire industry of the country under review every seven or eight years, fine art being a standing division of the programme. And, in the third place, to restrict the conditions under which exhibits have hitherto been received, by making all articles undergo a preliminary sifting, through appointed committees of selection, thus excluding all works that do not possess sufficient artistic merit to warrant their exhibition, and by the further exclusion of mere masses of natural products. The manufactures exhibited this year will be woollens and pottery, in addition to fine arts of every description. This series of Exhibitions is the result of the financial success of that of 1851, which left a surplus of £180,000. This sum the Commissioners bound themselves to deal with according to the spirit in which the Exhibition had been conceived, namely, the encouragement of industrial art. It will in no way diminish from the pleasure which the industrial and mercantile classes will take in these Exhibitions, to learn that the Commissioners will require neither Government money nor public guarantee. The exhibits, we are informed, are arriving rapidly, a parcel of native cloth from Bavaria being the first consignment.

MR. C. H. WOOD, F.C.S., has been elected by the Committee of Publication of the British Pharmaceutical Conference to be editor of the Year-Book for 1871. It is stated that there were two other candidates. The manuscript is to be placed in the hands of the Committee not later than July 31st, 1871. A cordial vote of thanks to Mr. Ince, for his valuable services in editing, at a very brief notice and at much personal inconvenience, the Year-Book of Pharmacy for 1870, was proposed by Mr. Hanbury and seconded by Mr. Matthews. Candidates for membership sending in their names to the London Secretary, Professor Attfield, 17, Bloomsbury-square, W.C., and enclosing the subscription, 5s., and 7*½*d. for postage (in stamps, or Post-Office order, payable to John Attfield at the Bloomsbury Office), will receive by return of post a copy of the Year-Book.

THE following appears in the *American Naturalist*:— "Human blood is easily distinguished from that of many mammals, birds, reptiles and fishes, by the size and form of the globules; and tests, both chemical and microscopical, have been proposed for distinguishing human blood from that of some of the domesticated animals. In medico-legal cases, such, if good, would be of the utmost importance, but it is generally conceded that none exist which can be admitted as absolute. If an observer had given him blood from man and the dog, without knowing any circumstance which would lead to an opinion as to their origin, there is no valid sign which would justify him in going into court and saying which was and which was not human. The test of odour given off when sulphuric acid is added to the blood, however successful it may have once been in the hands of some experts, has not, after many years, come into use, and that of the size and appearance of the globules also fails, as the globules of some of the domesticated animals offer the same characteristics as those of man."

REFERRING to the communication in *Nature* "On Glycerine Solutions of Pepsine and other Substances," by Professor Michael Foster, which we quoted in our last, Dr. Lionel S. Beale writes to that publication, coinciding generally with Professor Foster's remark that the means hitherto adopted for preparing pepsine for medical purposes are clumsy and inefficient. Dr. Beale, however, claims one exception, a process described by himself in 1858 which he says answers perfectly, and has been employed in practice ever since. It simply consists in quickly drying the mucus expressed from the pig's stomach glands upon glass plates. The dried mucus is then powdered and kept in stoppered bottles. It retains its properties for years. Eight-tenths of a grain will dissolve one hundred grains of coagulated white of egg. From this powder is easily prepared by solution in distilled water a perfectly clear and colourless digestive fluid of great activity, which *can be readily filtered*.

THE PUBLICATION OF PRESCRIPTIONS.

BY JOSEPH INCE.

"Honour a physician with the honour due unto him, for the uses which you may have of him; for the Lord hath created him. The Lord hath created medicines out of the earth, and he that is wise will not abhor them."—*ECCLESIASTICUS* xxxviii, 14.

THERE is no educated pharmacist who does not fulfil this direction to the letter. Time was when the physician and the pharmacist had but too little in common: the one was a man of trained intelligence; the other might or might not have been his intellectual equal; and there can be no true companionship where there is no mutual respect. Thanks to the efforts of the last thirty years, this condition of things has ceased, to the advantage of both sides.

The pharmacist is satisfied with perfectly understanding the duties of his own occupation, though to this for the next five years there will be exceptions; and the "professional" is more than glad to trust his medical reputation to those who can understand his directions, execute them in the best manner, read them with accuracy, and not imperil their success either by inexperience or ignorance. So patent was the common-sense view of this idea, that no sooner were the examinations of the Pharmaceutical Society established, than the handwriting of celebrated practitioners was introduced to students as one branch of study. It was held an unrighteous thing to shut them out from a branch of knowledge essential to the safe conduct of their business, and an unjust thing to the admirable hand of men who practise the healing art, to expose them to the chance of failure arising from incompetent dispensing.

A few hundred prescriptions constituted the whole stock of the Society's collection. It was amply sufficient at the time. This small library of autograph formulae was initiated by the late Jacob Bell and some of the examiners whom it would be invidious to name, as, happily for the interests of pharmacy, they are still living, and performing their accustomed duties. Since the passing of the Act, the external aspect of things has undergone a change; the examiners with difficulty get through their work. 207 candidates presented themselves for the last preliminary examination, the numbers formerly being possibly twenty-four. Can we stand still? Can we say supinely, "You, my ardent young friends, care for education; but we, the examiners, do not care to give you instruction?" At once the exigency of the case was seen to be imperative.

The secretariat was at least quadrupled. Practical pharmacy was acknowledged by the presence of an

officially elected professor; the museum was enlarged, the library doubled; and the instant it was shown that one department, that of autograph prescriptions, was not in keeping with the general advance, the Board of Examiners recommended to the Council that further arrangements should be undertaken. Two grants of money, voted by the Finance Committee, were sanctioned; the result being, that thirty volumes, representing the history of medical practice for the last half century, will soon be ready for distribution, fifteen being at this moment in use by the London Board of Examiners.

We do (I mean we pharmacists) honour the physician; we recognise not only his scientific acquirements, but the wonderful generosity with which, without exception, he so often exercises his art, "and all for love, and nothing for reward." There is no class of men who practically *give away* so much. We not only respect their professional skill, but therefore, as a natural consequence, we honour their names; we delight to be able to decipher their peculiar signatures, to be familiar with their individual mode of exhibiting remedies; and knowing these particulars we are not likely to turn captious critics, and are best prepared to carry out their instructions.

The movement on behalf of this special teaching was seconded by most of the historic houses, the list of whose names would form the Court Guide of Pharmacists.

Are these the men likely to sin against the rules of proper reticence, or to be wanting in the ethics of courtesy? Is it possible that an influential body, ranging from the President downwards, including Fellows of the learned societies, not excepting the Royal, and intimate friends of the very practitioners, whose confidence they are supposed to betray, would be influenced by no higher motive than "to gratify a curiosity which may savour of impertinence, and violate rules which ought to be respected, and usually are so."

Yet a storm passes over the hitherto tranquil lake, and this is the opinion of the *British Medical Journal*, unacquainted with the circumstance that distinguished men belonging to their special order have not refused their aid:—

"Mr. Joseph Ince is commencing in the *Pharmaceutical Journal* a series of papers which we think open to some objection. For the information of young pharmacists he is publishing a series of prescriptions to be used by way of exercise; and illustrating, as we understand, the peculiarities of style of prescribing, calligraphy, and composition of living physicians and surgeons. The object is in many respects a good one. But it is worth considering how far this accords with proper reticence and courtesy, and with a sense of the legitimate purposes for which prescriptions are written. Physicians do not write prescriptions primarily for the instruction of schoolboys, or for the criticism of their teachers in pharmacy. It is quite true that such documents, if preserved, will serve the purpose. But, before putting these documents, which have a distinctly private character, to a public use other than that for which they are intended, the permission of their authors should, we think, be asked. It is not customary to publish a living man's correspondence without obtaining his leave, and the same rule will apply to his prescriptions. It may very easily happen that the particular prescriptions selected for publication and critical discussion, are those which the author would not choose to submit to that ordeal without certain qualifying explanations; and, as many of these are selected for their difficulty and eccentricity, this is particularly likely to happen. If it be too tedious and difficult to obtain the permission to which we refer as indispensable, then the signatures should be erased. They add nothing to the didactic value of the prescriptions as *pontes asinorum*, and, by gratifying a curiosity which may savour of impertinence, they violate rules which ought to be respected, and usually are so."

The *Pharmaceutical Journal*, January 28, 1871, p. 612, inserts the following in an editorial paragraph:—

"The *British Medical Journal*, referring to the paper by Mr. Ince in our last number, expresses an opinion that while the object is a good one, it is worth considering how far it accords with proper reticence and courtesy. It thinks that before putting such documents to a public use the permission of the writers should be asked, and if this were not possible, the signatures should be erased."

No comment is added, nor explanation.

Let me just say, that beyond personal labour and whatever prominence that may bestow, I act directly under authority. I have uniformly set my face against this collection of recipes being a private scheme. It was commenced as it is continued, by permission, and the whole subject, it is hoped, will speedily be withdrawn from notice owing to its completion. I am not commencing a series of papers in the *Pharmaceutical Journal* which may be thought open to some objection, for not another line from me relative to this matter will appear in its columns. I did contribute one paper to demonstrate that the collection of prescriptions for provincial associations would not be inferior to our own; that we did not choose (for it is not my sole doing) to fill up books at random, but that universal pharmacy would contribute, as it has done, to honour the physician, and to present every imaginable variety of his handy-work. We will not consent from any false delicacy to erase his signature or mutilate his productions and render them comparatively worthless, but trade marks are destroyed, and the names of patients are of course withdrawn.

Surely the day will come when students will reverently wish to study actual pharmacy other than that given in books—actual Latin construction other than that explained in grammars; and while, on the one hand, there is no medical man who will not rejoice that his directions will be intelligently comprehended, on the other, additional zest will be afforded, zeal in Pharmaceutical study fostered, and respect for the profession deepened by either the advanced pharmacist or the student being thrown in immediate contact with the *ipsissima verba* of those whom both esteem so highly.

COLLECTIONS OF PRESCRIPTIONS RECEIVED DURING FEBRUARY.

1. James Thos. Gwatkin, 49, Grand Parade, Brighton.
2. John Bienvenu, Southampton.
3. Joseph Knowles. [Dr. Gream, Dr. Williams, and the late Sir B. Brodie.]
4. E. B. Vizer. [J. Elliotson.]
5. F. Oldfield.
6. John Henry Atherton, Nottingham.
7. Messrs. Duncford.
8. John Balmer. [Dr. Birkbeck, Sir Charles Locoock, Dr. Farre, Dr. Burder, Sir A. Cooper, and Bransby Cooper.]
9. William Blain, Bolton.
10. H. G. Mumbray, Higher Broughton, Manchester.
11. Wm. J. Halliday, 65, Bury New-road, Manchester.
12. F. Baden Benger, Manchester.
13. John Balmer. Second contribution. [Dobell, Golding Bird, Toynbee.]
14. E. S. Griffiths (late Rorke), 47, Mortimer-street, Cavendish-square. An admirable collection.
15. Augustus Bird, Examiner. [Pettigrew, Frederick Bird.]
16. Henry Deane, Clapham.
17. W. J. Taylor, Cleveland, Middlesborough-on-Tees.
18. H. Tölker, Boitzenburg on the Elbe, North Germany.

Four additional volumes are now ready—

- I. Liverpool.
- II. Manchester.
- III. Bradford.
- IV. Bristol.

Thus twenty-two volumes are completed; the remaining eight are in a forward state of preparation. Each provincial volume represents an assortment of autograph formulæ, derived from forty collections.

PRIZE ESSAY.

BUSINESS HABITS.

BY F. BADEN BENDER, MANCHESTER.

ONE of the most interesting and practically useful theories or doctrines of modern science, is that of the conservation of energy, which regards all the forces of nature, either actual or potential, as forms of one and the same energy, or power of doing work, all convertible one into another. The steam-engine affords us a simple illustration. Here we have chemical action, combustion, transformed into heat, and heat into mechanical force; by suitable means it is easy to convert this into electricity, and electricity into light, or back again into heat; and we are assured that, were it not for the imperfections of the apparatus we use, this amount of heat would be precisely that with which we commenced—force, energy, being indestructible. If, too, the mental and moral forces existing within us, either in an active or latent state, be alike transmutable, what a glorious result might be obtained by the conversion to *good*, of all the *evil* forces at work in the world! At all events, every earnest, thoughtful man may call up to his mind such a vision of possibilities as shall stimulate him to seek out and make the best use of his own powers, as far as possible adapting them to his particular requirements. One practical result of this will be the formation of habits; and here, reference will be made rather to the principles of action and mental conditions out of which business habits arise, than to any very definite or special illustrations of them or their application.

By "business habits" we understand habits most conducive to ultimate success in business. Those involving doubtful principles need no denunciation here. Though there are men who succeed by a shrewdness bordering closely on dishonesty, and an acuteness which preys on the credulity or ignorance of others, such success, bought by the sacrifice of all that is noble and manly, will be scorned by a class striving, as ours is, to raise itself by education and merit to an honourable position.

True business habits, then, are as well known by name to all of us, as are the various forms of physical force—heat, electricity, etc.; and perhaps to some, the two series of names convey alike no true ideas of what they really represent. We call them habits of observation, order, accuracy, decision, self-control, caution, perseverance. These may not be of equal importance in all occupations, or to all individuals. To one it may frequently be necessary that he think and act with the utmost promptitude; by another, self-control, or caution, will be daily and hourly needed.

The retail tradesman, from the variety of persons, characters, and dispositions with whom he has to do, the constantly interchanging positions of master and servant which he occupies, the numerous petty, but to him, all-important transactions which make up the sum of his daily work, is in especial need of established habits of thought and action. The semi-professional nature of our own vocation would seem to complicate the task of forming good business habits; but here the idea of transmutation of force comes in—for example, that very abstraction, which, though so essential to study, is so proverbially unpractical, may become a power of concentrating thought on each of the rapidly passing events of the day, invaluable to the accurate man of busi-

ness. All the mental training gained by hard study may be turned to account in business; the danger lies in ignoring the importance of such application. Experience teaches that where business habits are associated with scientific attainments, the greatest amount of success is possible, but points to innumerable instances of the failure of men possessing only the latter qualification. We need

"The drooping flower of knowledge changed to fruit
Of wisdom."

Perhaps the most important, certainly one of the first to be cultivated, is the habit of observation. There is none so commonly defective, none, the neglect of which entails more waste of time and opportunity. By its exercise nearly all knowledge is gained—knowledge of ourselves, of other men, of the materials, processes, and implements with which we work; of the laws, social and natural, by which we and they are governed. The observant business man profits by all that passes around him. He notes the rise, fluctuation, or decline of public taste or opinion in matters connected with his business; he is thus able to anticipate and prepare for the future. He has frequent opportunity of awakening an interest in scientific subjects—or, it may be, of stimulating one that is dormant—whereby his services are brought into demand. He learns to trace all effects to causes; hence the failure of others often serves him instead of bitter personal experience. Few of us seize all our opportunities, because few of us *see* them all, and mainly fail to see them through not constantly looking for them.

"'Tis very pregnant—
The jewel that we find, we stoop and take it
Because we see it; but what we do not see
We tread upon, and never think of it."

By observation comes order, without which businesses may grow only to be unmanageable, and knowledge increase to be worse than useless. Arrangement is absolutely essential to comfort as well as to success. Time and work must be systematized; goods and accounts in order; information at command; skill at our fingers' ends. Judgment, to be reliable, must be founded on sequential reasoning; even language, to be readily intelligible, must be carefully arranged. The business man must possess, and exercise in the smallest details of his occupation, a cultivated sense of the fitness of persons, things, and places. We are thus led to the consideration of discipline. A ruler, be he a king or a chemist, must inspire either fear or confidence in those whom he governs. Happy he whose subordinates find that his orders are dictated by wisdom and not by whimsicality; that there is method in what may appear to them at first sight a madness. The maintenance of *morale* in an establishment is as important as in an army, and depends equally on the reliance which can be placed in the commander. Hence how important to the business man is accuracy, even if only considered as a prop to authority. The inaccurate man is never trusted; his advice, opinions, directions, threats, dicta of all kinds, are taken with reserve, *et cum grano salis*, and this not only by his *employés*, but by the wider world of his acquaintances, customers, and all whom it is his fate or policy to influence. Important to all, it is especially so to the pharmacist, for the public, unable to judge of the genuineness of the articles he trades in, will intimately connect their reputation with his own.

Decision, to be a valuable business habit, must be associated with accurate judgment. It is very important that we accustom ourselves to the rapid analysis of a mixture of pros and cons, and having mentally tabulated the result, it should be unnecessary to repeat the process. By this habit we gain strength and self-reliance, but must avoid contracting with these, rashness, or self-assertion and conceit, which,

besides rendering us blind to our own defects, and therefore most unlikely to remove them, very materially counteract our influence for good.

Probably our success in life depends more on our manners and tact than on anything else; we never speak to a man, scarcely look at him, without producing some impression for good or evil, to our advantage or disadvantage, and it should certainly be a habit of our lives to keep this fact in view. If we bring into our business transactions that courtesy, deference, anxiety to please, and other attributes of good breeding which we all admire, and endeavour to practise in private life, we shall scarcely fail to increase our connection. Patience and self-control will here be often needed. Our customers do not always feel it incumbent on them to treat us with politeness or even civility. Let us not be tempted to lower our behaviour to their standard. Such treatment cannot be met with better weapons than calm dignity and unruffled temper.

Business habits culminate in perseverance; it is the very force by which the others are established and maintained. Obstacles, disappointments, and discouragements, meet us so constantly, that only stout hearts win. We have all been told this a hundred times, but nevertheless too often forget it, and find ourselves with our hand set to the plough, yet looking back. Though habits are generally formed early in life, they need our continual efforts modifying, stimulating, restraining them. Even a good habit may either degenerate or outgrow itself, till it becomes mere eccentricity or mannerism. In character, as in art, harmony is essential to beauty, and beauty of character has, perhaps, the highest right to appropriate the poet's dictum that it is "a joy for ever."

"CON AMORE."

CONTINENTAL CHEMISTS.—II.

ITALY.

PHARMACEUTICAL organisation in the Italian Peninsula is chiefly based on restrictions limiting the druggist to a certain number of inhabitants. In the larger cities, however, it is evident that these restrictive measures do not militate against a large *clientèle*, and that such handsome shop-fronts as Grove's or Roberts's at Florence do attract not only all the tourist custom, but also win a considerable amount of patronage from the local *élite*. It is worthy of remark, and applicable to most Continental pharmacists, that all the handsomest and best-thriving drug-stores are in the hands of Englishmen, or are managed by them. Sinimberghi's new *farmacia* at Rome, and several of the English shops at Nice, are more elaborately and expensively fitted up than any in London or Paris.

The Italian legislature does not permit a druggist to open a shop in a village containing less than 1,500 inhabitants without some exceptional reason, such as extreme distance from a large town, or a general petition from the villagers. A second shop cannot be established unless the population should exceed 3,000, and 6,000 is the regulation number to support three pharmacists.

The Councils or Boards of Health are entrusted with the care and supervision of these regulations; and when a druggist wishes to establish himself he must forward to head-quarters a certificate from the local administration exposing all the reasons and requirements necessitating such a step.

The Minister does not give the requisite authorisation until he has consulted the Medical Council of the province and the superior Board of Health. Should a pharmacist wish to transfer his place of business to another town, or even to a different house in the same town, he is obliged to undergo all these formalities. Even then, he cannot open his business till the authorities have duly inspected and reported it "conveniently installed with a laboratory provided with all necessary apparatus and utensils."

To become a pharmacist in Italy, there are four principal clauses:—1st. The title of pharmacist, a diploma obtainable at any university. 2nd. To have attained the mature age of twenty-one. 3rd. To furnish a guarantee proportionate to the importance of the place in which you intend practising. 4th. A certificate of good character. This last clause may appear strange to those not acquainted with Continental customs, but, in some countries, even a baker cannot set up without very strong attestations regarding his morals; and in the little *livrets* recently abolished in France, which every workman and *employé* carried with him, ambiguous or mediocre testimonials frequently got the owner of them into trouble with commissaries of police, at any change of residence or employer.

When the owner of a pharmacy dies, the price of the business is settled for the heirs by the Board of Health. The Government tolerates the establishment of private religious drug-stores for the hospitals, convents, etc.; but the recommendation of the head Board is required.

Italian pharmacists are bound to make all officinal preparations according to the directions of the Italian Pharmacopœia. The price of medicines is fixed by special commissioners appointed by the Government, who not only accord a very large profit on the simple drugs, but take into consideration the time and skill required to produce any compound preparation, such as syrups, tinctures, etc. The Pharmacopœia is revised every ten years by the chief Board of Health, and the tariff once in three years. The Board is composed of a president and four councillors named by the Government, who visit, twice a year, all the pharmacies in the capital. The provincial pharmacists are inspected by special delegates appointed by the council of five, who swear them in for four years at a time. Every pharmacy is visited at least once a year. The inspector, accompanied by a local physician, a magistrate or mayor of the town, generally proceeds to examine the storing of the poisons, which are ordered to be kept under lock and key, and which I have often seen kept in a large box, something like a seaman's chest, divided with trays and pigeon-holes. After peering into a few ointment jars and smelling one or two tinctures, exchanging a few compliments, and signing the prescription book, the inspection is generally over. In all the royal custom-houses, importations of drugs are examined by specially-appointed inspectors, who reject, and order to be destroyed, any that may be adulterated or deteriorated.

The laws relating to prescriptions and dispensing are so very similar to those in force in nearly every country, that it would be superfluous to enumerate them; there is, however, one peculiar clause, as follows: "When a physician or surgeon prescribes a medicine of his own composition, which is not in the Pharmacopœia, the pharmacist must send, within a month, a copy of the formula to the Board of Health, to be examined and taxed." And again, in the last clause of the Italian Pharmaceutical Act, we find a decree which Englishmen would be inclined to kick at: "That all fines are to be applied to the Universities, deduction being made of one-third, which shall be paid to the *informer*." A very favourite method of prescribing powerful medicines is to order granules containing one milligram of some alkaloid. Syrups, too, are largely used, and Italians seem eternally to be taking lozenges. The celebrated *Aqua di Melissa* made at Venice is in great repute, and replaces the *sal volatile* so much taken in England. A great many French and English specialities are in demand; and I am sorry that many of my countrymen do not look a little more after their interests abroad, for, in nine pharmacies out of ten, spurious Henry's Magnesia, Anderson's pills, and a host of other patents, are to be found, Milan having a rather guilty reputation as the source of many of these. The glass-houses of Lyons turn out most of the imitation-bottles; and both Switzerland and Italy are overrun with spurious and discreditable specimens of French and English pharmaceutical products.

MR. EWEN has removed his Clarified Fat Works from 17, Garlick-hill, E.C., to 5, Hatfield-street, Stamford-street, S.E.

MR. ENGLAND, chemist, Huddersfield, has given up the retail business, and is cultivating the drysalteries department.

INDIGENOUS PLANTS.

DR. HAMILTON has taken considerable pains to compile a most useful table, giving the habitat of the indigenous plants included in the *Materia Medica* of the Homœopathic Pharmacopœia. The information is obtained partly from original sources, and partly from the standard botanical works. The multitude of students of botany who are among our readers, will thank us for republishing this excellent guide. It appears first in the *Monthly Homœopathic Review*. We publish as much as we have space for this month, and will conclude it in our next issue.

ACONITUM NAPELLUS.—Monk's Hood. Wolf's Bane.—Found in a truly wild state on the borders of the River Teign at Little Hereford. Very abundant at Ford, near Wiveliscomb, Somerset, and in watery grounds in that neighbourhood; at Ogwell Mill, and below Staverton Bridge, Devonshire.—*Flowers, June and July.*

N.B.—Acon. Nap. is cultivated in many flower gardens as an ornamental plant.

ÆSCULUS HIPPOCASTANUM. Horse Chestnut.—Domesticated everywhere.—*Flowers, May.*

ÆTHUSA CYNAPIUM.—Fool's Parsley. Lesser Hemlock.—Found very abundantly in cultivated fields and gardens all over the kingdom: a common weed.—*Flowers, July and August.*

AGARICUS MUSCARIUS.—Fly Agaric.—Found in fir and other woods all over the kingdom. Very abundant about Esher and Weybridge in Surrey, in the enclosed plantations in Woolmer Forest, Hants, etc., etc.—*Autumn.*

ANAGALLIS ARVENSIS. Scarlet Pimpernell. Poor Man's Weather Glass.—Corn fields; very frequent.—*Flowers, June and July.*

ANTHEMIS NOBILIS. Wild Chamomile.—Corn fields and waste grounds; very frequent.—*Flowers, August.*

ARUM MACULATUM. Cuckoo Pink. Wake Robin. Lords and Ladies.—Found in woods and thickets, and under hedges, in every county in England. Plentiful in the hedges and woods around London.—*Flowers, April and May.*

ASARUM EUROPEUM.—Asarabacca, Hazelwort.—Found in mountainous woods; rare. Berkshire, between Maidenhead and Henley. Cumberland, about Ramsden, Marldon, and Keswick. Huntingdonshire, in some woods about Kimbolton. Lancashire, in several woods. Northumberland, at Middleton, near Alnwick. Westmorland, rather plentiful about Kirby Lonsdale. Yorkshire, in many places near Halifax; in Broad Bottom Wood, near Mytholmroyd, six miles from Halifax; Harper-rood-clough, near Sowerby Bridge, three miles from Halifax; Hebden Bridge, near Halifax. In Scotland, at West Binny, near Linlithgow.—*Flowers, April and May.*

ATROPA BELLADONNA.—Deadly Night-shade.—On waste grounds, more particularly on a calcareous soil. Oxfordshire, Witchwood Forest, near Witney; between Nettlebed and Henley; Woodstock Park, near the Monument. Berkshire, Tilehurst Common and Englefield. Worcestershire, in the ruins of Dudley Castle. Cambridgeshire, near Wisbeach; Triplow; Foulbourn. Suffolk, on the banks of the high road between Bury St. Edmunds and Newmarket. Northamptonshire, on the road-side near Peterborough, and at Kingsclif, in Blithewick Park. In the valley of Furness Abbey, called the Vale of Night-shade. At Cunstone, near Rochester, Kent, Surrey, about Reigate Hill, and near Dorking. Scotland, on Inchcolm Island, and near the ruins of Bothwick Castle.—*Flowers, June, July, and August.*

BELLIS PERENNIS.—Common Daisy.—Pastures everywhere. *Flowers from spring to autumn.*

BERBERIS VULGARIS.—Common Barberry.—In woods and hedges, on calcareous soils. Berkshire, in Bagley Wood; in hedges near Cumnor. Beds, Clapham Lane and Milton Ernys. Cambridgeshire, about Chesterton; Granchester; Triplow; Hinton and Hildersham. Devonshire, near Chudleigh; Ilfracombe; Plymouth. Essex, about Walden. Somersetshire, near Tadwick; at Lyngcombe and Bradford. Warwickshire, Oversley, Grafton, and Belsley; Leek, Wolton and Warwick; in hedges near Bolton Hall, and on the banks of the Avon, near Holbrook Grange, near Rugby. It is frequent in the hedge-rows in Norfolk and Suffolk; also in many parts of Scotland and Ireland. *Flowers, May and June.*

BOVISTA (*Lycoperdon Bovista*).—Puff Ball.—In dry meadows and on downs. (Formerly very plentiful in Kensington Gardens.) In all parts of the kingdom. *August and September.*

BRYONIA DIOICA. Red-berried Bryony. Wild Vine. Tetterbury. In woods and hedges, in almost every county in England. It is rare in Scotland. *Flowers, from May to September.*

CHAMOMILLA (*Matricaria Chamomilla*). Wild Chamomile. Bitter Chamomile. Corn Fever-few.—In corn fields, on light soils, on waste grounds, on dunghills, and by the road sides. Very abundant in many counties. *Flowers, from May to August.*

CHELIDONIUM MAJUS. Common Celandine.—Waste places near towns and villages; in rough, shady places; on rubbish and old walls. *Flowers, May, June, and July.*

Abstracts of Foreign Papers.

ON THE ASSAY OF SOAP.

F. SCHULZE communicates to the *Journal de Pharmacie et de Chimie* a rapid and convenient method of estimating the value of soap. The method is the same as that adopted for estimating the hardness of potable water, i.e., it is based on the fact that lime water precipitates a solution of soap yielding a liquor which does not give a persistent froth by agitation. The process is conducted as follows: A standard solution of lime is made by dissolving 1·6 grammes in water, with a little caustic soda, and making up the solution to one litre. Five grammes of the soap are weighed and dissolved in boiling water; the solution is allowed to cool, and is made up to a determinate volume, say 100 c.c. for soft soap, 200 c.c. for hard soap. Three c.c. of the standard lime solution are now added to 20 c.c. of distilled water, and to this diluted solution the soap liquor is added gradually from a burette. At first, the soap added is precipitated by the calcareous water, and a persistent froth is not produced by agitation, but, after a time, a point is reached at which the froth becomes persistent. The volume of soap solution requisite to produce this effect is then noted; the quantity is smaller the better the quality of the soap. If, moreover, an assay has been made on a sample of soap of standard value, a very exact appreciation of the value of any given sample of soap may be subsequently obtained by comparing the results.

LIQUID PEPSIN AND SACCHARATED PEPSIN.

Mr. E. Scheffer alludes, in the *American Journal of Pharmacy*, to an essay on liquid pepsin, published by him in the same journal last year, in which doubts were expressed as to the durability of the preparation in warm weather. These doubts became confirmed facts on the approach of warm weather. Careful experiments made with filtered specimens of the preparation established its liability to fungoid growths; upon which, the author deemed it expedient to increase the quantity of glycerine in the preparation to 50 per cent., without changing the proportion of mucous membrane or muriatic acid. The resulting preparation proved much less liable to become mouldy, but in all cases care must be taken to entirely remove the mucus as soon as possible. For several reasons, the author further endeavoured to make a dry pepsin, which, while available for dispensing in the form of powder, would serve for the preparation of the liquid pepsin. To effect this, the precipitated pepsin is freed from water as much as possible by means of a press, and then mixed in the damp state with a weighed portion of sugar of milk, and rubbed in a mortar until it has become dry. By weighing the mixture again, the quantity of exsiccated pepsin is ascertained, and sufficient milk-sugar is added to reduce to such strength, that one grain of the saccharated pepsin shall dissolve twelve grains of coagulated albumen. The pepsin dried without addition of an inert substance could not be dispensed unless it were dissolved, as it would be impossible to powder it. When the saccharated pepsin is prescribed in solution, it is necessary, in order to dissolve it, to add a little acid, hydrochloric or lactic. The following formula is recommended:—

℞ Sacch. Pepsin, 61 grains.

Water, 5 fl. oz.

Hydrochloric acid, 1 fl. drachm.

Shake in a bottle until the milk-sugar and pepsin are completely dissolved, then add glycerine, three fluid ounces, and filter. A colourless liquid is formed, of which one fluid ounce dissolves 1½ drachms of coagulated albumen. The author adds chloride of sodium to the saccharated pepsin, as he found, by experiment, that pepsin with chloride of sodium dissolved albumen much quicker than without it.

OPIUM CULTURE IN AMERICA.

Another attempt at opium culture is reported in the *American Journal of Pharmacy*, by Mr. S. W. Kennedy, who procured some poppy seed from abroad, and supplied it to a friend in Illinois. The seeds were planted in rows, two and a-half feet apart, in well-manured, rather dry soil, and in moist soil. The seed sown in the moist soil failed. The plants received good garden culture, and attained a height of three feet. After the petals had fallen, and the capsule attained some size, horizontal incisions were made around the capsules in the afternoon, and the exudation removed in the morning, and dried in the sun. Some of the capsules failed to yield any juice, owing to the wound being too deep, and the juice passing into the cavity of the capsule. The yield of opium was small, many of the plants being imperfect. When treated by Mohr's process, with subsequent crystallization of the precipitate from alcohol, the opium yielded 8·75 per cent. of morphia crystals. Mr. Kennedy hopes to make a more successful experiment next year.

Homœopathy.

UTOPIA.

WE ask permission to say a few words to homœopathic practitioners. Our remarks apply with equal force to the practitioners of every school, and if allopathic doctors take our hint as well we shall be so much the better pleased, and their poor patients will be no worse off. We venture to ask them all a plain question, which as far as it comes under their notice will compel them, whether they will or not, to think for a moment. Is their primary object, in their character as professional men, the advancement of human health or the exaltation of the particular theory which they have espoused? The reply of the vast majority would, no doubt, be perfectly satisfactory and quite truthful. Then we say these are not fairly represented. Is it not a fact that the medical journals of either school give chief prominence to sneers at their opponents? Do not all of them, in effect, ask, "Can any good come out of the other 'pathy'?" Homœopaths have confessedly introduced several valuable medicines. Allopaths have admitted these into their *répertoire* with the utmost reluctance, and generally not until, in spite of their damp sponges, the ignorant public has come to recognise their value. Allopathic doctors too sometimes make a good hit. The *similia similibus* men will have nothing to do with it until some ingenious member of their persuasion fits it in with Hahnemann's dogma. Now, suppose a case which is by no means unusual. An allopathic journal reports a remarkable cure effected by some medicine not hitherto employed in such a case. Presently, a homœopathic critic will come down on the affair with a torrent of wrath, and perhaps will prove triumphantly that the cure is to be explained on the principle that *similia similibus curantur*. We would ask our warm homœopathic friend, in such a case, which feeling predominates in his mind, pleasure at the recovery of his fellow-creature, or indignation that the system which he represents has not received its rightful share of glory? To be strictly fair, we will put a reverse hypothetical case, and then conclude. A patient dies under homœopathic treatment. Suppose it to be of sufficient importance to deserve record in an allopathic serial, does our philanthropic friend on that staff experience regret for a human being's death, or is this more than balanced by the thrill of pleasure which the failure of his despised foe occasions? These are reflections arising only from reading the organs of both 'pathies. Both sides are honest; but could they not be as honest and a little more eclectic. We will

offer an inducement. The author of the "Ingoldsby Legends" when a boy entered a Friends' meeting house with a penny tart in his hand, and holding it up to the silent assembly promised it to the one who should speak first. "Thou must depart," said a venerable old gentleman. "It is thine," imperturbably replied the rascal. And the tart which we offer to the physicians who first adopt the scheme which we suggest is the confidence of the public.

Q. E. D.

The *Australian Medical Journal* is not a homœopathic serial; at least it does not profess those doctrines. But in a recent number it has devoted considerable space and some talent to a report of several cases which seem to have caused some excitement in the medical circles of Melbourne. The article from which we are about to quote is entitled "Homœopathic Ferment," and is written in a playful style throughout, a tone which it seems is the correct one to adopt when the death of a patient of heterodox tendencies is under review. First then, "Some months ago, a homœopathic practitioner, having been called in to a patient, apparently at the point of death, but in reality just commencing to recover, obtained the credit of having achieved a cure little short of miraculous. Legitimate medicine, it was said, had confessed itself unequal to the task of combating the disease, and *faute de mieux*, the aid of a globulist was sought. The globulist came, the man recovered! The *post hoc, propter hoc* principle received a wonderful accession of strength, and from that time to this present, globules have been looking up. A homœopathic dispensary has sprung into being, and a triad of infinitesimalists having gathered around them six or seven persons of little reason but very strong faith, have constituted themselves an institution, and, as a matter of course, have found other unreasoning and blindly believing persons ready to give of their substance to keep the institution in being. There has been large talk of demanding for it a subsidy from the Government, and as a Bishop and a Chief Justice are among its supporters, it has altogether put on rather a bold front. One would have thought, however, that so scholastic a gentleman as the bishop is understood to be, would have been something more logical than to argue, that because thirty-three years ago he had taken some globules, and had taken globules since then, and had not been seriously ill during all that time, therefore homœopathy is a true science. His lordship is not generally considered an amusing person, but on the occasion of the annual meeting of the subscribers of the Homœopathic Dispensary, he justified his right to be considered amusing. He had, he said, suffered from heartburn, and formerly used to take carbonate of soda for his heartburn, but now he takes nux vomica, and finds it relieves the heartburn as satisfactorily as the carbonate of soda did. Ergo, homœopathy is an indisputable truth."

Well, one swallow certainly does not make a summer, but presuming that the bishop tells the truth about his reverend heartburn (and we may surely presume this much), we think he would be a very unreasonable man indeed, if after such a pleasant experience he was not willing to say a good word for homœopathy. Possibly the good bishop was a curate, thirty-three years ago, and *prima facie* we should be inclined to respect more highly a remedy which would cure a bishop's heartburn, than one which was only effectual in the case of a curate. Now for another extract, which we assure our readers occurs in the very same article: "Mr. Cook, a confectioner, of Castlemaine, was lately committed for manslaughter, in consequence of the death of a person treated by him according to the Hahnemannic doctrine. A man named Sutton died from rheumatism, complicated with pericarditis and pneumonia, after having been globulated by a homœopath and purged by a herbalist, with a playful variation in the shape of cold bandages. Mr. Hutchison was called in when the man was moribund, and of course could do nothing. The case seems to have been exactly of the kind that a little prompt treatment by any intelligent medical man would have brought to a favourable termination, and the criminality of Cook was of a negative kind. He had treated other cases with globules and cold bandages, and nature had cured the disease. He had, in fact, been so far fortunate in dealing with cases that required no treatment. But the pitcher went once too often to the well. The unfortunate subject of globulistic experiments died, the

experimenter found himself committed on a charge of manslaughter, and at once a local journal, having homœopathic leanings, starts the whine of 'persecution,' abuses Dr. Bone and Mr. Hutchison, who gave evidence at the inquest, and with equal folly and ignorance, demands to know if such an outrage upon the liberty of the subject is to be permitted, and the progress of medical science to be stayed? Scraps of opinion are culled from various medical authors, and flung with impotent fury at the heads of all who venture to question the competence of a confectioner to treat pericarditis." We suppose this case is genuine, though the names of Dr. Bone, the surgeon, and Mr. Cook, the confectioner, make it read, at first sight, slightly apocryphal. Of course, we do not defend the system of a confectioner practising as a physician, but the fact that he did so ought surely to be regarded as shifting the responsibility of Mr. Sutton's death, to some extent, from homœopathy itself and placing it entirely on the shoulders of Mr. Cook. We quote the case, however, chiefly to ask on what ground has the writer so rigidly applied the *post hoc, propter hoc* argument in this unfortunate case, while he sarcastically refuses to homœopaths the benefit of it in the case which he first mentioned? Now that we are trotting out some of our Latin phrases, we may mention that logicians recognise another form of argument known as the *tu quoque*. It may give our Antipodean contemporary a little food for reflection if we add that a few million persons die annually in Europe under the allopathic treatment.

CORRECTION.

In our notice of the Homœopathic Directory, last month, it was stated that no mention of the Homœopathic Pharmacopœia was included. For this erroneous statement we owe an apology to the editor and publishers. It is certainly not mentioned prominently, but its title does occur among the list of homœopathic works which is contained in the Directory.

Photography.

PRACTICAL RECIPES.

THE *Scientific American* quotes from the *Photographer's Friend* some formulæ and processes, which it is stated are those that are in general employment in the best photographic galleries in the city of New York.

CLEANING THE GLASS.—Immerse for several hours in a strong solution of common washing soda, rinse, and rub with alcohol and Joseph paper. Kurz varies from this a little. After the soda bath, he puts the glass into a nitric acid and water, equal parts, for 2 hours. Then wash under tap, and rub with a sponge, rinse, and coat with filtered albumen (white of one egg to 24 ounces of water, well beaten).

NEGATIVE BATH.—Forty grains of silver to the ounce of water, iodize slightly with iodide of silver; slightly acidulate with nitric acid.

TO RESTORE THE BATH.—Add fresh silver if required. Boil down one half. Add as much water as necessary, filter, and it is ready for use.

COLLODION.—All use ether and alcohol, equal parts. Fredericks uses iodide of ammonium, $4\frac{1}{2}$ grains to the ounce; bromide of potassium, 2 grains; cotton, 6 to 7 grains, washed in ammonia. Gurney uses 5 grains iodide of ammonium, $1\frac{1}{2}$ grains bromide of cadmium, $1\frac{1}{2}$ grains bromido of ammonium. Sirony uses $4\frac{1}{2}$ grains iodide of ammonium, 2 grains bromide of potassium, 5 to 7 grains cotton. Iodize the ether and alcohol, then add cotton. Kurz uses iodide of ammonium, 4 grains; iodide of cadmium, 2 grains; bromido of potassium, 2 grains.

DEVELOPER.—One ounce protosulphate of iron to 1 quart of water, to which add only enough acetic acid to make it flow well.

FIXING THE NEGATIVE.—Use a saturated solution of hyposulphite of soda. In some of the galleries they add 1 ounce of cyanide of potassium to 4 quarts of the hypo-solution.

SENSITIZING THE PAPER.—Fredericks uses 35 grains silver to the ounce of water; to each $\frac{1}{2}$ gallon add $\frac{1}{4}$ ounce muriatic acid; neutralize with liquid ammonia; filter to remove

chloride, float 30 seconds, fume 10 minutes. Gurney uses 40 grains silver, slightly alkaline, or with 1 drop ammonia added; float 40 seconds, fume 10 minutes. Sarony uses 50 to 55 grains silver, slightly acidulated with nitric acid; float 1 minute, fume 15 minutes. Kurz uses 60 grains silver, slightly acidulated with nitric acid; float 1 to 2 minutes, fume 15 to 20 minutes.

TONING BATH.—To $\frac{1}{2}$ gallon water add $\frac{1}{2}$ ounce solution of common washing soda saturated, or enough to make it feel slippery to the fingers, then add a suitable quantity of chloride of gold.

FIXING BATH.—Water, $\frac{1}{2}$ gallon; hyposulphite of soda, 12 ounces.

GREEN GLASS FOR THE DARK ROOM OF PHOTOGRAPHERS.

Mr. Gaffield, of Boston, has shown that while chemical rays to a slight degree will pass through yellow glass, they are perfectly excluded by green and red. This has suggested to photographers to substitute green glass for yellow in the developing and fixing room. The yellow light is very trying to the eyes, while the green light is very agreeable. Carey Lea recommends the green glass, after an experience in the preparation of hundreds of plates where it had been substituted for the yellow panes.

Medical Gleanings.

SUPPOSING the Act of Parliament should be obtained amalgamating the various examining bodies, the query has been raised as to what shall be the title which the united corporation thus formed shall grant. The *Medical Times and Gazette* has suggested, "Licentiate in Medicine, Surgery, and Midwifery." This is far too complex, and would never be accepted or employed. Why should not the board be permitted to confer the degree M.D., and confine the title "Doctor" to gentlemen who had obtained it? M.D. (Lond.), or M.D. (Edin.), would still no less retain its value; indeed, if it really were higher, the distinction would be all the more marked.

The Edinburgh Royal Infirmary has become a noted battle-field. The struggle for the supremacy between the sexes has been fought out there with probably more persistence than has been manifested in any other part of her Majesty's dominions. And although for the moment the combatants are at rest, and the issue between them is settled, a candid outsider is compelled to confess the unsatisfactory result that the victory does not lie with the conquerors. That Miss Jex Blake and the gallant six should be defeated only by a very narrow majority, and in consequence of a coalition between the cold aristocrats and a set of roughs whom we should fear to compliment if we described as barbarians, tells a story of public sympathy which cannot be gainsaid. There is plenty of fair argument against the admission of female students to anatomical classes; but to us this appears to be vastly overweighted, when compared with the immense benefit to society, and particularly to the poorer classes, if medical education were fully extended to women. Read this one sentence from the speech of Professor Charteris at Edinburgh, when moving that "immediate arrangements" for this purpose should be made at the Infirmary, and consider all that it suggests. He said, "there is a crying want of medical education for women; for wives of foreign missionaries, for example; for wives of ministers in lonely places at home, for Bible-women, for lady visitors of city poor, and for many others whom I need not enumerate; and I cannot believe that such medical education would corrupt the sex." If it is so, that in order to fit themselves more efficiently for the work of aiding sufferers by works of mercy, women are ready to come forward and place themselves under a course of training and study, is it not shameful that these grand institutions of our land, unequalled for medical practice all over the world, should deliberately, and worse, rudely, slam their doors against them. It is not wonderful that medical science advances so slowly, if its professors are chosen from such a class as the students of Edinburgh University. Nor if those professors can think it worthy of themselves, and of their cause, to crack off a series of small jokes when

arguing on a question of this kind, such as a certain Dr. Gillespie is reported to have done, apparently in order to secure the applause of the howling idiots who ought to have been turned out of such a meeting. The medical papers unanimously support the majority in their decision to exclude female students from the school, and almost unanimously abuse and sneer at Miss Jex Blake for her persistent advocacy of the right of women to study. We have read most of Miss Blake's speeches, and confess that to us they appear to show dignity, as well as spirit and sense, and whether the doctors themselves like it or not, we hope soon to see her and her colleagues successful in their aims.

We see it reported that Professor Christison's assistant, a Mr. Craik (whom the *Lancet* describes as "an individual of the male sex") is about to enter an action against Miss Blake for having gently hinted that on one occasion he was hardly sober. He values his reputation for temperance at £1,000.

How much of the present small-pox epidemic is owing to the labours of that marvellous society of antediluvians which calls itself the Anti-Vaccination League, cannot be correctly ascertained. This is certain, that their energetic display of ignorance and abuse, has been succeeded by a prevalence of small-pox in some of our large cities which has not been equalled for many years. In one week 180 deaths have resulted from small-pox in London alone, and it has been proportionately severe in other large towns. Now small-pox is a disease the prevention of which is almost the only purely medical triumph of which we can boast, and yet the blessings of Jenner's great discovery seems to be, to a great extent, neutralized because of the little leaven of ignorant assumption which does not understand, and therefore will not believe, evidence which scientific men of all countries accept as final and complete. Let any who have thoughtlessly joined themselves to this noisy League consider their position. Let them examine the evidence that is before them in favour of vaccination. And then let them continue their support of the League if they can. Vaccination should be frequently repeated. Intervals of five years are not too short. There is overwhelming proof that while vaccinated persons may take the infection and may die of the disease, the chances are vastly in their favour as compared to persons who have not been vaccinated; and persons only recently vaccinated are almost perfectly safe. We would say one thing more. We write strongly against the Anti-Vaccination League, but we do not think their arguments are altogether unfounded. Medical men have performed the operation with a vast deal too much carelessness, and especially on poor patients. We doubt not that syphilitic and other constitutional poisons have been in many cases transmitted by this means, and we hold it to be a perfectly reasonable demand that being compelled to submit to the operation by law, we may at least expect that provision will be made that it shall be carried out with the utmost efficiency. Every person ought to be as sure of safety in vaccination as if he were a prince or a duke, and there need be no difficulty about it. As it has been carried out in some parts the miracle is that so little injury has resulted. But there is no doubt that an urgent necessity now exists to enforce the vaccination law most rigidly. The following figures, lately published, are very suggestive. The deaths from small-pox in Ireland were—

From 1830 to 1841	58,006
", 1842 to 1851	38,275
", 1852 to 1861	12,725

The Compulsory Act was passed in 1864.

In 1866	187
In 1867	20
Up to August, 1868	0

The lessened mortality in the second two decennial periods was owing to the compulsory extension of vaccination.

Now compare with the above the official return of fatal small-pox cases in London during the past year, and consider whether we are doing all we might do to lessen the ravages of this fearful disease. The deaths in London from small-pox numbered 99 in the first thirteen weeks of 1870; in the next thirteen weeks they were 118; in the third

quarter they were 157; and in the last thirteen weeks of the year, 584. On this subject we have the somewhat unusual pleasure of coinciding with the remarks of all our medical contemporaries, and we are very glad to observe that they persistently call attention to the matter. In the midst of it, however, one of them—the *Medical Times*—provides a sickly smile by commencing a short article with the sentence, “Small-pox may well be called the queen of epidemics, for it is of all the most loathsome and fatal.” The italics do not appear in the original.

We should be sorry to lose the opportunity altogether of mentioning in these pages the brave and loving life and death of one of the noblest ornaments of the profession, Dr. Davis, a gentleman of colour, who came from Barbadoes, graduated at Aberdeen, and worked with extraordinary energy at St. Bartholomew's Hospital. He was tolerably well known before the breaking out of the war between France and Prussia, as he devoted much of his spare time to preaching the Gospel throughout the country. In October he resigned his appointment at St. Bartholomew's in order that he might do all that one mortal could to alleviate the horrors of a cruel war. Funds were provided for him, and what he had himself spared not. He was only spared to labour for about six weeks, but in that short time he did wonders by establishing soup-kitchens in the North-eastern provinces of desolated France, and hundreds of sick, wounded, and starving looked to him as their preserver, and, as *le bon docteur noir*, he was loved and honoured throughout the land. He died of small-pox, which he had taken when in an exhausted state, on November 27th, at the early age of twenty-eight. Few of the heroes of the war will compare with this truly valiant one.

The *Medical Press and Circular* has been informed “by a gentleman occupying a most important post, and whose position and requirements should place his evidence beyond suspicion,” of a new and terrible poison, which can be sent in a letter, the reader of which, on opening the envelope and inhaling the deadly influence, will suddenly drop down dead, with scarcely time enough, it would appear, to ascertain the name of his affectionate correspondent. The *Press and Circular* thinks it necessary to await confirmatory evidence, before giving entire credence to the report. Will the inventor supply this evidence to the incredulous editor in the form of an impregnated letter? At the same time he will please to send us a hundredweight. We will employ it with great discretion.

Miss Garrett, M.D., was married to Mr. Anderson, on the 9th inst. The *Law Times* coincides with the *Lancet* that by this act she will forfeit her seat on the London School Board; the legal ground being that Miss Garrett was elected, and that Mrs. Anderson may be quite a different sort of person. This transmutation of disposition has been hinted at in other cases, but we imagine few persons would have expected that the law recognised the possibility. Should it turn out that the surrender of her seat on the School Board is required of Mrs. Anderson, there can be little doubt, judging from her enormous majority when elected, that the Marylebone constituency would gladly renew their vote of confidence.

The new medical monthly, the *Doctor*, is not up to the mark. Its professed object is to present an epitome of the practice and literature of the profession at home and abroad; to analyse, condense, and criticise the most important contributions to medical science; and by its leading articles to elevate the profession. We take the opinion of those best able to form a fair judgment that its epitomising is not satisfactorily performed; and we believe ourselves competent to add that its editorial articles are weak.

Hospital Sunday has been celebrated at Liverpool, Manchester, and Sheffield. In the latter town over £1,000 was raised; in Manchester the collections realized £1,743; while in Liverpool a total of nearly £5,000 was reached.

On February 4th, an inquest was held at Brighton on the body of a gentleman found floating off the pier. When taken ashore it was identified as that of Mr. Breidenbach, the well-known perfumer of Bond-street. He had been lately suffering from mental depression, but his daughter said he had not exhibited any suicidal tendencies. The verdict was “Found drowned.” Mr. Breidenbach was fifty-eight years of age.

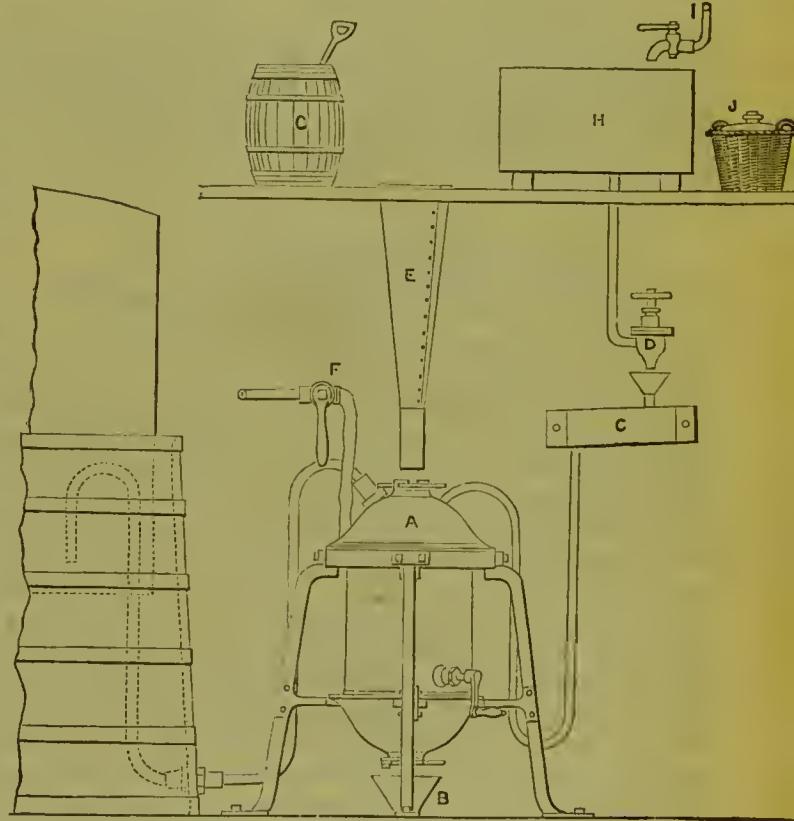


HICK'S SELF-ACTING PERFUMER.

M R. WHITBY, of 47, Mortimer-road, is introducing a new style of Perfume Diffuser, which is a considerable improvement on its predecessors in the same line, as it not only requires no adjustment of the tubes, but is of such a shape that the spray can be forced in any direction, it being more especially adapted for application to one's own face, or for a lady to produce a sweet shower of impalpably fine and delicate perfume, bathing her ringlets with the fragrance of flowers. The perfumers are supplied, ready filled with scent, in neat little boxes, to retail at 1s. or 2s. each.

ARRANGEMENT FOR SODA-WATER MANUFACTORY.

In the engraving which we present below we show some modifications and improvements in soda-water apparatus which have been arrived at and fitted up by Mr. Samson Barnett, of Hoxton. Those of our readers who superintend a soda-water factory will probably learn something by following our description. In the first place, it will be seen that an



upper floor, or at least a secure platform, is important. Thereon is (c) the cask of whiting, which is shovelled down the shoot (e) into the generator (a), and after being acted upon by the acid therein, it is allowed to pass away into a pan (b) when “killed.” The history of the acid is this. Mr. Barnett establishes a lead-lined cistern (ii), which may be of any size, according to the requirements of the factory. A supply of water is ready from the tap (1) to dilute the vitriol. At d is a newly-registered acid tap, unaffected by the strongest sulphuric acid, and permitting a complete control over the supply of that to the generator. The acid-box (c) into which it next arrives is connected with a siphon, so that by turning the tap (d) it is evident that an exact quantity of

vitriol can be passed to the generator with perfect safety. In the generator itself a novel principle is manifest, as the fans which agitate the mixture revolve on a horizontal axis instead of a vertical one, which we believe is the ordinary method of construction. Mr. Barnett says:—"The principle of agitation, or mixing vertically, is mechanically and practically wrong, as most matter or particles will remain in their existing state, and continuously follow round, whereas, by the horizontal mixing, every part must be carried upwards and downwards." Cleanliness, safety, and economy are claimed as the results of these inventions and arrangements, and there certainly does seem reason to anticipate that these will be effected to a considerable extent.

NEW GRANULAR PREPARATIONS.

WE have received from Messrs. Young and Postans, of Baker-street, samples of two new effervescent preparations introduced by them, which are likely to be prescribed when they become known, particularly by the physicians of fashionable quarters. The first contains Citrate of Bismuth and Pepsine, five grains of each in every teaspoonful, and in the second is added to the above five grains of Citrate of Iron. These specimens of "elegant pharmacy" are exceedingly well made, and seem as if they will keep well.

THE SANDRINGHAM FEEDING-BOTTLE.

MESSRS. DIXON, DEAN, AND CO. (whose new warehouses in Cow Cross-street are well suited to the druggists' sundry business) have introduced this, which is a nice-looking white glass shilling feeding-bottle. The makers say that it is the only bottle free from all angles, and is therefore more readily cleaned.



THE YEAR-BOOK OF PHARMACY.

THE first issue of this newly-born annual, emanating from such an important body as the British Pharmaceutical Conference, is an event of too much interest to be allowed to pass with the few words which we were able to give to it last month. It is to be the first of a series which, in a pharmaceutical sense, is intended to preserve "the story of our lives from year to year." That the great majority of those who read these lines will also be in possession of the book itself, is a sufficient reason to prevent us from indulging in any lengthy quotations from its pages. But we would direct especial attention to the preface. There will be found, very distinctly set forth, the right of existence of a Year-Book of Pharmacy, and there, also, the editor's plan of the work is sketched out very clearly, showing that by pharmacy the British Pharmaceutical Conference understands an art as comprehensive as the world. Mr. Ince writes: "It has become an impossible task for each individual to follow the progress of our art, even as it exists amongst ourselves, as journals of all descriptions, reflecting every shade of interest, crowd upon his notice thick as the leaves in Vallombrosa. Still less can he hope, trusting to his personal resources, to have a moderate acquaintance with the thought and experience of those who both think and feel exactly like ourselves, but who speak in languages different to our own. It has been the earnest wish of the British Pharmaceutical Conference to link together, with some degree of systematic arrangement,

various ideas, French, German, American and English, bearing on 'our common mistress, Pharmacy.'

And again: "Great difficulty has been felt in ascertaining the exact boundary lines which mark off Pharmacy, Chemistry, and Materia Medica. Often one is so much like the other that an accurate decision as to their respective places has caused anxiety. A grateful feeling has been inspired by the discovery that all manuals of reference hitherto published have had the same dilemma to encounter. The chief object aimed at in this compilation is to chronicle in brief sentences and narrow compass the labours of the last twelve months. The design has not been hastily conceived, nor has it been adopted without due consideration. A reasonable hope is entertained that it may prove useful."

The successful accomplishment of this design obviously depends very considerably on the judgment of the editor of the work. The materials from which he has to select are so abundant, that his labour consists rather in cutting down than in constructing. There were not two opinions of the fitness of Mr. Brough for this appointment. His singular ability to express in a few graceful sentences the ideas which others would take as many pages to convey, combined with his special acquirements as a chemist and pharmacologist, pointed him out as the one man in Great Britain qualified to superintend the compilation of such an annual as this, but he had scarcely commenced it when a long illness intervened, which prevented him from executing a work which would have been so congenial. All will admit how bravely Mr. Ince has filled the breach. It was a serious labour to go through all the pharmaceutical and medical literature of England, France, Germany, and America of more than twelve months, and abstract therefrom a concentrated infusion, to speak appropriately, and dress it up for this book. But this was what it was necessary to do, and evidently Mr. Ince has done it with characteristic industry, patience, and conscientiousness. That he has traced out a path different to that which anyone else would have followed it is unnecessary to say. Mr. Ince never writes without inviting or rather compelling controversy. No living man would ever entirely coincide with his views, still less could any one predict what were likely to be his views on any given subject, unless, indeed, it were a question of absolute right or wrong. Just so, when he undertook the compilation of this Year-Book. We knew it would show evidence of a vast amount of labour, and we knew it would be interesting. But its contents and the method of its arrangement were as problematical as a London salsage. Now that it has appeared, it pleases and perplexes the reader in about even proportions. It is readable throughout, and that is saying a good deal for a book of this character. The abstracts are wonderfully well done, and one would be puzzled to say what has been left out that ought to have been in, or in what manner the subjects could have been better arranged. Yet there is ever present a sort of abruptness which seems to detract from the book's value, but which is perhaps rather studied than accidental. Two things strike us as faults which, however, may not appear blemishes to others. The first is the apparently undue exaltation of American pharmacy. To the United States is given the place of honour. American pharmacy takes precedence of that of all the rest of the world, and throughout the book it keeps protruding itself in an almost aggravating manner. We admired America when it was unfashionable so to do and we have in no wise altered our opinions. Willingly, too, we acknowledge the services which have been rendered to our art by such ministers of it as Procter, Parrish, Ebert, and many others. But for original investigation in phar-

macy—and we take this very Year-Book as our standard for the comparison—America occupies towards Europe much the same position as she holds in other fields of literature, science, and art. Clever, practical, and of immense service, particularly in the shabby parts of the art, the pharmacists of America pay us back handsome interest for the use they make of our accumulated stores of learning, which have been obtained by centuries of such patient labour as they have but little taste or capacity for. It is a clever thing to make money fast, and that is what American pharmacy aims at. But, unless it be claimed that to teach this is the single or the chief aim of the British Pharmaceutical Conference, we must submit that the pharmacy of America has rather too prominent a position accorded to it. By all means give it place in such a book as this, but it is only a false compliment to offer to the United States to place its pharmacy ahead of that of all other nations. We do not mean that this is intended, nor do we suppose that Americans will thus accept it. They have common sense as well as national vanity. But the reader's first impression is that this is what the editor thinks. The second point on which we have to remark is that, in our opinion, the book attempts a too comprehensive survey. As we before remarked the variety of its contents makes it interesting, but does it not somewhat detract from its essential character? Possibly we should have been the first to complain if it had been otherwise, but we cannot avoid the remark that, as the Year-Book of Pharmacy, it is hardly dry enough. It should have had a little more of the character of the catacombs and a little less of that of Madame Tussaud's.

These remarks will read hypercritical; we do not think the editor will so regard them. With many thousands besides we are deeply interested in the Year-Book, and only by free criticism can such a work reach perfection. It is quite superfluous to add that there is much in it to praise, and the fact that the reviews of the Century of Old Books, a few of which we have ourselves had the pleasure of publishing, now appear for the first time, adds a singular literary charm to the collection. The papers read at Liverpool are, of course, reported *in extenso*, as well as the discussions which took place there, and glancing through these we are reminded of the pleasant September week. May we urge those who read these lines and who are all, to some extent, forming the pharmacy of 1871, to remember that it behoves them now to be extra careful and diligent, for—

"A chiel's amang them takin' notes,
And faith he'll prent 'em."

MATERIA MEDICA.*

DR. SCORESBY-JACKSON's Note-Book on Materia Medica is less known, at least in England and among pharmacists, than the treatises on the same subject by Royle or Garrod. In some respects, however, it compares favourably with both of them. Originally written by Dr. Scoresby-Jackson as a guide for the medical students in Edinburgh University, it is especially adapted to the wants of the student and the prescriber. The information it contains, however, is of a character to render it of constant service to the chemist and druggist as a work of reference and as a companion to the Pharmacopœia. The posology and the action of the various medicines are very fully treated under each head, while in no case are the chemical and botanical characteristics neglected. The labour of adapting Dr. Jackson's

* Dr. Scoresby-Jackson's Note-Book of Materia Medica. Second edition. Edited by Dr. Angus Macdonald. Edinburgh: MacLachlan and Stewart.

work to the present Pharmacopœia has been most judiciously accomplished by Dr. Angus Macdonald, who has also made the work as complete as possible by the addition of articles on Chloral Hydrate, Carbolic Acid, and other modern remedies. The volume contains nearly 700 pages, and the manner in which an immense mass of facts are arranged and condensed is remarkable.

MESSRS. LOCKWOOD AND CO. have issued the new volume of their "Year Book of Facts," edited as usual by Mr. John Timbs. It is a summary of the year's progress in mechanics, natural philosophy, electricity, chemistry, zoology, botany, geology, mineralogy, meteorology, and astronomy; and, like all the work performed by Mr. Timbs, it bears evidence of intelligent carefulness and patient labour. The volume before us contains an exceedingly life-like portrait of Professor Huxley, engraved on steel.



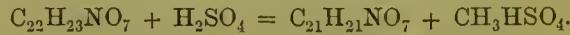
CHEMICAL SOCIETY.

JANUARY 19TH.

PROFESSOR ODLING, F.R.S., Vice-President, in the chair. The following gentlemen were elected Fellows:—R. Bannister, H. T. Brown, J. Moss, R. J. Moss, and E. Potts.

The following papers were read:—

H. E. ARMSTRONG, "On the Action of Sulphuric Acid on the Natural Alkaloids." On heating narcotine with sulphuric acid, which had previously been diluted by its own volume of water, over the water-bath, and subsequent addition of ammonia to the mixture, a body is obtained which shows at once the properties of dimethylnornarcotine, the base which Matthiessen and Wright had obtained from narcotine by means of hydrochloric acid. The reaction takes place, therefore, according to the equation:—



From this result, the author concludes, it becomes evident that Gerhardt and Laurent's view, who regarded this body as an amide, must be abandoned.

On treating codeine in a similar manner, and dissolving the base obtained in hydrochloric acid, a crystalline hydrochlorate was obtained. An analysis of the product showed it to be hydrochlorate of codeine. The first action of sulphuric acid results, therefore, in the production of an isomeric codeine. By the further action of sulphuric acid one molecule of water is removed from two of codeine, then one H_2O from one codeine, and finally, apomorphine seems to be formed. On this last point, however, further evidence has yet to be awaited.

C. EKIN, "On the Origin of Nitrates in Potable Waters." The author found nitric acid in the water of a spring, which is very remote from any agency that could impart to it decaying animal matter. On closer examination he found that the water in question had passed through a fossiliferous stratum. This observation necessitates a modification of the "previous sewage contamination theory."

D. HOWARD, "On an Alkaloid from Cinchona Bark, hitherto undescribed." This new alkaloid was obtained from the mother liquors of quinine salts. It is a yellowish oil, which cannot be sufficiently purified for analytical purposes. The formulæ of its platino-chloride corresponds with the formula assigned by Gerhardt to the anhydrous plantino-chloride of quinine.

Mr. MACLEOD exhibited an ingenious little contrivance, by means of which eudiometer tubes, which have lost the outer portion of their discharging wires, may yet be made use of.

FEBRUARY 2ND.

Professor WILLIAMSON, F.R.S., President, in the chair. The following gentlemen were elected Fellows:—R. J. Friswell, R. F. Humiston, M.D., A. H. Mason, and J. R. Tustin.

Professor FRANKLAND, F.R.S., read a paper "On the

Development of Fungi in Potable Water." He began by alluding to the experiments Dr. Heisch had made, some months back, with waters contaminated with sewage. When to such waters some sugar was added, very soon a kind of fermentation ensued, and a rich fungoid growth made its appearance. Professor Frankland has now repeated and extended those experiments and arrived, with one or two exceptions, at the same results. But in the course of his researches he encountered some reactions, which revealed to him that the presence of sewage matter in saccharic water is in itself not sufficient to produce fungoid growth, but that the presence of phosphates in some form is indispensable to such production. Professor Frankland further found that the germs which give rise to the development of fungi need not necessarily come from sewage contamination, but that they may be derived from the atmosphere. Finally, he found that animal charcoal does not remove those germs. Dr. Frankland thinks that the sugar test of Dr. Heisch, for the detection of traces of sewage contamination, may be turned into a very delicate re-agent for the detection of minute quantities of phosphates; for when these defy the power of the usual laboratory tests, they yet are capable of feeding those germs, and thus giving rise to the fungoid growth.

From all his observations Professor Frankland drew the following conclusions:—

1. Potable water mixed with sewage, urine, albumen, and certain other matters, or brought into contact with animal charcoal, subsequently develop fungoid growths and other organisms, when small quantities of sugar are dissolved in them, and they are exposed to a summer temperature.

2. The germs of these organisms are present in the atmosphere, and every water contains them after momentary contact with the air.

3. The development of these germs cannot take place without the presence of phosphoric acid, or a phosphate, or phosphorus in some form of combination. Water, however much contaminated, if free from phosphorus, does not produce them. A German philosopher has said, "*ohne Phosphor kein Gedanke.*" The above experiments warrant the alteration of this dictum to "*ohne Phosphor gar kein Leben.*"

LONDON CHEMISTS' ASSOCIATION.

ANNUAL DINNER.

THE new session was very successfully inaugurated by a pleasant dinner, held on the evening of January 12th, at the Union Tavern, Regent-street; Mr. Sands filled the chair, and infused good spirit into the evening's proceedings. The usual loyal and patriotic toasts were got over, with the aid of some good music and songs, which were continued at intervals throughout the evening. "The Army, Navy and Volunteers" was coupled with the name of Captain Toogood, who made a suitable reply. Among the toasts of a more special character may be mentioned "Success to Pharmacy," which was responded to by Mr. Martindale; "The London Chemists' Association," to which Mr. Beynon replied; "The Pharmaceutical Press," coupled with the names of the Editors of the *Pharmaceutical Journal* and *CHEMIST AND DRUGGIST*; the memory of Mr. J. T. Porter, the late lamented secretary, was drank in silence. "Absent Friends" were remembered; and Mr. Willmott was called on to reply for "The Visitors." Mr. C. J. Peale spoke with authority on behalf of "The Ladies," and chairman, vice-chairman, and host received the honours which they had all worthily merited.

At the meeting on Thursday, Feb. 2nd, Mr. Cox occupied the chair. Several ordinary members were elected, and Mr. J. B. Hurst, of Louth, and Mr. W. H. Pullin, of Leamington, were elected corresponding members.

A communication from Mr. J. Butten, of Rangoon, containing notes on Indian Pharmacy, was read; it was considered desirable to bring the matter forward again for discussion.

Mr. BEYNON then read a paper on "The Preservation of Vegetable Substances." He said the preservation of vegetable and animal substances had, of late years, attracted a great deal of attention, more especially the preservation of

such as are used for food, and which, of all others, are most prone to decomposition. The keeping of vegetable substances was of great interest to the pharmacist, deriving as he does so many of his medicines from the vegetable kingdom. Upon the storing of them, more care should be bestowed, as many lost their medicinal properties if not dried or preserved in a proper manner, and kept under suitable circumstances. Mr. Beynon first spoke of the preservation of the lower orders of plants, as the algae, fungi, lichens, and filices, mentioning those which are used as food, and detailing also the best ways of making specimens of them for the herbarium. He then proceeded to speak of the preservation of the different parts of plants, as their leaves, fruits, seeds, etc., giving the different methods by which ordinary articles of food, as corn-seed, potatoes, etc., are kept from deteriorating. The keeping of digitalis, conium, and other medicinal plants, and the preparations made from them, received much attention. The bottling of fruits, now so much practised, was fully described, and also the preparing of them for the purpose of illustrating structural botany.

After an interesting discussion, a vote of thanks was given to Mr. Beynon for his instructive paper; and great regret was expressed at his resignation of the secretaryship of the Association, which office he has held nearly two years. Mr. Jessop was elected secretary *pro tem.*

A hearty vote of thanks to the Chairman concluded the business of the evening.

SHEFFIELD PHARMACEUTICAL AND CHEMICAL ASSOCIATION.

THE annual dinner in connection with the above Association was held at Mr. Armfield's Adelphi Hotel, on Thursday evening, the company numbering between 40 and 50. The chair was occupied by the President, Mr. J. T. Dobb, and the vice-chair by the ex-President, Mr. Wilson. Amongst the guests were Dr. J. C. Hall, Mr. Allen, F.C.S., Mr. Peters, London, and Mr. Tomlinson, Manchester. The usual loyal and patriotic toasts having been proposed and honoured, Dr. Hall gave the toast of the evening, "Success to the Sheffield Pharmaceutical and Chemical Association," and in the course of his remarks congratulated the Association upon its prosperous condition. He alluded in graceful terms to the relationship which existed between the medical and pharmaceutical professions, how dependent one was upon the other, and at some length reviewed the sections of the annual report, which had been distributed that evening. Mr. Cocking proposed "The Honorary Members and Lecturers," and acknowledged the great services which the latter had rendered to the Association.—Mr. Allen responded, and gave an interesting description of the uses to which chemistry had been and was being applied.—Mr. Wilson proposed "The Medical Profession" in very complimentary terms, to which Dr. Hall responded.—Mr. Cubley proposed "The President," and congratulated the members upon having elected a gentleman who was held in such universal respect, and who had so ably conducted the business of the inaugural meeting.—Mr. Prestou proposed "The ex-President," and Mr. Peters "The Vice-Presidents," to which Mr. Cocking responded. The "Treasurer and Council" was proposed by Mr. Jervis, and responded to by Mr. Ward.—Mr. Dobb, in proposing the next toast, said: The important toast I have to propose for your acceptance is the "Continued Success of the Pharmaceutical Society of Great Britain." What is the sphere of labour of our Sheffield Pharmaceutical and Chemical Association in its connection with the parent society? To my mind the efforts of your Association should be devoted to extending and establishing the library and museum, to maintain and uphold as far as our funds permit our Latin, botanical, and chemical classes with the regular course of lectures. In the future looms a laboratory for practical chemistry, with an established teacher. With the support and approval of the Pharmaceutical Society these forces might be so utilised and brought to bear upon the education of those in this neighbourhood who are studying for the profession, as would be a great advantage to them. Sheffield is in the midst of a large and populous district, and could be made the centre of a district. The examiners

of our local association might give certificates of competency in the examinations, and thus save the expense and time occupied in journeys to London for such a purpose. I do hope the day is not far distant when these desires will be realised, and that the Pharmaceutical Society will give us all the moral and material support in their power.—Mr. Wilson responded.—Several other toasts were also given, and the proceedings were enlivened by recitations and music.

THE CHEMISTS' BALL.

ON the evening of the 25th of January was celebrated another anniversary of this young, but vigorous and delightful *réunion*, which, perhaps, more than any other event throughout the year, testifies to the social advancement of the position of pharmacists, and to the more cordial friendship which mutual association has aroused among them.

The ball of 1871 was so brilliantly successful in every respect, as to eclipse all its predecessors, although there has been on each of the four previous occasions, abundant reason for congratulation. The number present in 1870 was 298, which was more than had ever attended before; but this year a total of 397 was reached. Some of those present will, perhaps, be surprised to learn that of this number, there were 177 ladies, and 220 gentlemen. The spirit of Von Moltke must have commanded the ladies, for they appeared to be in the greatest force in every corner of the room. Besides comprehending the leading metropolitan chemists, we were informed that visitors were present from Edinburgh, Manchester, the Isle of Wight, and other provincial cities and towns.

Messrs. Warwick and Watson deserve most of the credit for the *éclat* attending the ball this year, as we believe it was mainly through their influence that the attendance of the chief magistrate of Europe was obtained. The Right Honourable the Lord Mayor was accompanied by Miss Dakin, and the hearty manner in which they entered into the enjoyment, together with his genial speech at the supper table, won for him the golden opinions of an assembly of chemists, who here, for the first time, had the opportunity of paying a tribute of respect to one who, by raising himself to such a dignified position, has representatively done credit to all. As chairman, in proposing the toast of the evening, the Lord Mayor said he felt how much satisfaction was to be realized in the performance of duties, and he desired to take the opportunity of expressing his approval of such a gathering; for independent of the pleasure it afforded to all who took part in it, it was calculated to be eminently useful when regarded as an annual rallying-point of the members of our most important profession. He was glad also to learn that yet another object was served, and that the surplus proceeds of the ball flowed "heavendirected" to the poor. Though he was precluded by usage from adding to the one toast he now proposed, he could not, while surrounded by so much youth and beauty, abstain from making some reference to the presence of those without whom we should not be able to enjoy the pleasures of the evening, any more than we could dispense with their good offices in other matters. For this reason he would ask them to add three cheers to the toast of "Success to the Chemists' Ball."

After the cheering had subsided, the Honorary Secretary, Mr. T. Donald Watson rose and said, that on all former occasions they had strictly adhered to the one toast; but he was quite sure that all would coincide with him that it was right to depart from that custom on this special occasion, and show our appreciation of his presence there that evening, by drinking to the health of the worthy chairman, the Right Honourable the Lord Mayor. He felt confident that if on any future occasion he should honour them with his presence, either in his official or private capacity, he would meet with a cordial welcome. He then called upon the company to drink heartily to the health of the Right Honourable the Lord Mayor, coupled with the name of Miss Dakin.

The toast having been duly honoured with hearty cheers, and the worthy chairman having replied in very courteous terms, the company again adjourned to the ball-room, where dancing was resumed and kept up with great spirit.

The Pharmaceutical Society was well represented; but in saying this, it seems necessary to guard against the inference that the ball is by any means an offshoot of that Society. It is essentially catholic, and so long as it remains so, we do not hesitate to predict for it a continued course of splendid success.

Everything connected with the ball was conducted in the most first-class style, even to the hour of breaking up. Dukes and duchesses could hardly have run it closer to daylight.

CHEMISTS WHO DIED IN 1870.

SOME of the most renowned and useful chemists of Europe have passed away during the year 1870. It is well to call them once more to mind before we close the volume for the year.

Professor F. T. Otto died at Brunswick, January 13, 1870. To him we are indebted for some of our best tests for poisons and for one of the most thorough works on chemistry extant.

Professor Gustavus Henry Magnus died at Berlin, April 4, 1870. He was in early life a chemist, but of late years had devoted himself exclusively to physics.

Professor Palmstedt died in Stockholm, April 6, 1870. He was one of the benefactors of Sweden, the friend and contemporary of Berzelius, and lived to the ripe old age of 85.

Niepce de St. Victor died in Paris, April 7, 1870. To him the world owes a debt of gratitude for the brilliant discoveries made by him in photography.

Professor Alexander P. Bolley, died August 3, 1870. In the field of technology he never had a superior, and we fear it will be long before we shall find his equal.

Professor Wm. Allen Miller, died Sept. 30, 1870. The well-known author of Miller's "Chemistry," and one of the most zealous investigators in the department of celestial photography.

Augustus Matthiesseu, died by his own hand, in October, 1870. A conscientious, sensitive worker in electricity, and the discoverer of laws of telegraphy that are of the utmost value to the world.

Thus passed away seven of the most active workers in the field of chemistry, whose places it will be difficult to fill.—*Scientific American*.

DR. SHERIDAN MUSPRATT.

We regret to record the death of this eminent chemist, which occurred on February 4th, at Liverpool. Dr. Muspratt's name has been so long and so prominently associated with the progress of chemistry, that it is with some surprise that we learn that his age was only fifty. The following sketch of his career appears in "Men of the Time":—

James Sheridan Muspratt, M.D., F.R.S.E., M.R.I.A., etc., chemist, born in Dublin, March 8, 1821, was, on account of his father's removal to Liverpool, educated by the Rev. Mr. Hind, and afterwards by Dr. Cowan. At this early period he evinced a taste for chemistry; and, having travelled through France and part of Germany, he entered the Andersonian University of Glasgow, where he studied in the laboratory of Professor Graham, whom he followed to London. Before he was seventeen, he was intrusted with the chemical department at the works of Pecl Thompson, in Manchester, and published a paper upon "Chloride of Lime," which attracted considerable attention. Proceeding to the United States, he entered into a trading partnership, which proved unsuccessful; and after visiting the various States, he, in 1843, repaired to Giessen, and studied under the great Liebig. Having remained two years in Giessen, he resolved to test his strength, and published a paper upon the sulphites, which appeared in Liebig and Wöhler's *Annalen*, was copied into all the scientific annals, and won him his degree of Doctor of Philosophy, a title never before granted to a man so young. It was followed by a paper on the "Pretended Formation of Valerianic Acid from Indigo," read before the British Association at York. At this period, in conjunction with Prof. Hofmann, he discovered toluidine and nitrauniline, two organic bases of the utmost importance; in 1845 he left Giessen, having, while there, edited Plattner's "Treatise on the Blowpipe," which

reached a fourth edition, with emendations, bearing the title "Muspratt and Plattner on the Blowpipe." Dr. Muspratt, who visited various parts of Germany in order to become personally acquainted with her distinguished men, in 1847 returned to Giessen, and spent four months in its laboratory, discovering several remarkable bodies produced from the sulphocyanides of ethyle and methyle. A paper on this subject was printed in Liebig's *Annalen*, as well as in the Chemical Society's Transactions. In 1848 he gave a paper on the Selenites; in 1849 he published some very interesting remarks in Liebig's *Annalen*, on "The Blowpipe Reactions of Strontia and Baryta." His paper on "Carmusellie Acid, a new Acid from Clovo," was published in 1851 in the "Proceedings of the Royal Society," and in the *Philosophical Magazine*. He founded a college of chemistry in Liverpool, students from which occupy prominent posts in various parts of the globe. In 1854, a Glasgow publisher engaged Dr. Muspratt to write a Dictionary of Chemistry, which has commanded a large sale in England, America, Germany, and France. He was elected a Fellow of the Royal Societies of Edinburgh and Dublin, and a member of the Société d'Encouragement in France; and the oldest university in the United States conferred upon him the honorary degree of M.D., the only one held by a British subject. In 1863, he published a reply to a critique in *Blackwood*, condemnatory of the "Dramatic Writings of Sheridan Knowles," his godfather; and in 1848 married Miss Susan Cushman, a popular actress (sister of the celebrated actress Miss Charlotte Saunders Cushman), who died in 1859.

ARTISTS' COLOURS.

MR. F. S. BARFF, M.A., F.C.S., has just completed his course of Cantor Lectures, before the Society of Arts, on "Artists' Colours and Pigments," which have been of great interest and considerable value. We reproduce from the *Society of Arts Journal* a summary of mineral colours and their uses, compiled by Mr. Barff, and published in that journal as an appendix:—

LEAD PIGMENTS.

White-lead is a basic carbonate, turned brown and black by the rapid or slow action of sulphuretted hydrogen. It, after a time, loses its body, to a great extent, by chemical action with the oil with which it is mixed. It cannot be used with sulphides of metals less energetic than lead, as it reduces them, forming brown sulphide of lead. It is a pigment which should never be used in pictures, except for the first preparation of canvas or wall-painting grounds.

Sulphate of Baryta, called barytes and constant white, is very permanent, of a bluish tint; has no body in oil, but is a good white in fresco, silicious, and water-colour painting. Chemically, it has no action on other colours, and is not itself affected by any ordinary destructive agent. It is a natural product, called heavy spar.

Cremnitz White, a beautiful white, with less body than ordinary white-lead; it is, doubtless, made by precipitation; it, like ordinary white-lead, decomposes sulphides, and is decomposed by sulphuretted hydrogen.

Flake White is a form of carbonate of lead, therefore liable to the same objections as other lead whites. It has good body.

Oxychloride of Lead is a basic chloride of lead, and is altogether useless as an artist's pigment, it has but little body, and is decomposed by sulphuretted hydrogen. It is sometimes called Pattison's white-lead.

Chromes—Light, Middle, and Orange.—All these pigments are chromates of lead, and therefore liable to be blackened by sulphuretted hydrogen. Light chrome contains lead sulphate with lead chromate; the middle tint is a neutral chromate, and orange chrome is a basic chromate of lead. When used with oil, they may, with care, retain their colour for a long time, the oxidised oil protecting them from the action of sulphuretted hydrogen. They cannot be used in silicious, fresco, or any other method of water painting. They are destroyed by alkalies; they should never be used with Prussian blue or kindred colours. On the whole, it would be as well for artists to reject them, as better and

safier pigments can be employed for the same purpose as they are.

Red Lead is a mixture of two oxides of lead. The tint is good, if well made. It cannot be used with white-lead, and it is blackened by sulphuretted hydrogen. It should not be employed as a pigment.

ZINC PIGMENTS.

Zinc white (oxide of zinc) is a permanent pigment, is not affected by sulphuretted hydrogen; does not form soap with oils and fats, therefore it retains its opacity, does not decompose other pigments, and if used with proper vehicles, retains its whiteness. It is the best and safest white that can be used. It is most durable in silicious painting, as it forms chemical compounds with potash and silica.

Chinese white is a zinc white.

Zinc Orange is a most unstable pigment.

Naples Yellow is made from zinc and antimony; and that which is now prepared by the best colour-makers is a good pigment, and may be safely used in oil. The old Naples yellow contained lead, and was therefore objectionable.

BISMUTH PIGMENTS.

Pearl White is a salt of bismuth. It blackens by the action of sulphuretted hydrogen, and should never be used as a pigment.

Bismuth Purple is the higher oxide of bismuth; it is blackened by sulphuretted hydrogen, and therefore valueless.

COPPER PIGMENTS.

Blue Verditer is hydrated oxide of copper; it is acted upon by sulphuretted hydrogen; it should not be used in oil, and though more stable in water, it is hardly a pigment for high art work. Certain blues are made from the natural blue basic carbonate of copper, and from malachite. but they have no interest for the artist.

Emerald Green is made by precipitating a solution of arsenious acid (common arsenic) with acetate of copper. It is on the whole a permanent colour. It should not be used with cadmium yellow, as that is a sulphide, and with it forms sulphide of copper, which is brown. It is a good oil pigment when properly used; it has but little body. It answers well in water-colour painting; it cannot, however, be used in fresco or silicious painting. If it is desired to mix it with a yellow, Mr. Salter recommends auricolin. It should be remembered that emerald green is a deadly poison. The other copper greens are Scheele's green, Schweinfurt green, malachite, verdigris, and chrome greens (these are not the true chrome greens). Scheele's green and Schweinfurt green contain arsenic. None of these pigments are of value to the artist, and therefore they do not require special notice here.

COBALT PIGMENTS.

Smalt is a fused silicate of cobalt, used in water-colour painting. It is permanent, but has little body. If ground too fine it loses its beautiful tint. It can be employed in fresco and silicious painting. It is not affected by sulphuretted hydrogen.

Cobalt Blue.—Thénard's blue is made by precipitating a solution of alum with a soluble cobalt salt, and heating the precipitate. When well made, it is a good permanent colour, useful in oil and water. It can also be employed in fresco and silicious painting. It is, however, somewhat affected by light, losing its brilliancy slightly. It is said to be changed by the sulphuretted hydrogen in the air. This is very much doubt.

Cobalt Green.—Rimman's green is prepared by acting on a solution of sulphate of zinc with a cobalt salt, and by heating the precipitate. It is a permanent colour.

Auricolin Yellow.—An excellent pigment in every respect. It is a double nitrate of potassium and cobalt. It is not acted upon by lime or by potash; it is, therefore, a good pigment for fresco and silicious painting. It may be used with safety in oil and in water. Sulphuretted hydrogen does not affect it, and it is permanent when submitted to the severest tests. It is not affected by admixture with other colours.

IRON PIGMENTS.

The Ochres are earths coloured by oxide of iron. The natural colour of these earths is yellow, but by burning they

get darker, and some become red. Indian red, red ochre, light red, etc., are all earths with more or less of the oxide of iron in them. All the ochres are permanent and stable if they have been well prepared. They may be used safely in every style of painting.

Venetian Red, as now prepared, is an iron-red; but, whether from adulteration or not, it contains lime; and, as it is made from the sulphate of iron, sulphate of lime gets formed, and this prevents its employment in silicious painting, for with silicate of potash a silicate of lime is immediately formed, and it becomes hard and lumpy. It may be used in oil, water, and fresco.

Colcothar is also an oxide of iron; it is very permanent, and, I believe, generally useful as a pigment. It can be obtained of different tints. It is, however, especially useful in fresco and silicious painting.

Prussian Blue and *Antwerp Blue* are prepared by precipitating a solution of ferrocyanide of potassium with sesquichloride of iron. There are, however, other methods of preparing them commercially, but their composition is the same. These colours, are not acted upon by acids, but are destroyed by alkalies; they cannot, therefore, be used in fresco or silicious painting. Prussian blues are really stable colours; with care in their use, and, when well protected, they last a long time, but they are liable to be decomposed by light and by alkalies.

MERCURY PIGMENTS.

Vermilion is a sulphide of mercury; it may be used in oil, water, fresco, and silicious painting. In all cases, however, it gets slightly darker in time; this is not a chemical but a physical change. The description of the preparation of vermillion has already been given in this course of Cantor Lectures. With the exception mentioned, this pigment is very permanent.

Iodide of Mercury.—A compound of iodine and mercury; is a beautiful colour, but it is easily decomposed by other pigments, nor is it in itself permanent. It should not, I think, ever be used as a pigment.

CADMIUM PIGMENTS.

Cadmium Yellow, Red, etc.—These are sulphides of cadmium, and, when well prepared, are very stable; they can be used in fresco and silicious painting. It has already been mentioned that cadmium sulphide decomposes emerald green. It is not safe to use it with lead pigments, unless it has been most carefully prepared; and here, inasmuch as decomposition may take place, and lead sulphide, which is black, be formed, it is better to avoid the mixture; no such mixture can occur in fresco or silicious painting, and it would be well if there was no chance of its occurring in any other style of painting, by the banishment of white-lead from the list of artists' pigments. No other salts of cadmium are important as pigments.

CHROMIUM PIGMENTS.

Green Oxide of Chromium.—This oxide is perfectly stable, and, as so many tints of it can be obtained, including the beautiful viridian, I hope it will be more largely employed than it has been. It can be used in all vehicles, and is perfectly permanent in fresco and silicious painting. Other chromium compounds are used in painting; the chromates of lead have already been treated of. Chromate of barytes is a good, safe pigment; it is used under the name of lemon yellow. It is permanent in fresco and silicious painting. The chromates generally are unstable colours, and, as there are so many other good yellows, they should not be used as pigments.

I have now noticed the composition and behaviour of some of the most common pigments, and, for the reasons already given, I think it needless at present to prolong the list.

POISONING BY MISADVENTURE.

An inquest was held at Mossley (Lancashire), on January 18th, on the body of a little child nearly twelve months of age, the daughter of Mr. Henry Jones, chemist, of that town. The child being unwell was attended by Dr. Bean, a surgeon, of Mossley. On returning to his surgery he wrote a prescription for some medicine containing solution

of tartarized antimony, syrup of chloral and colouring matter. The prescription was dispensed by his pupil, John Simeon Dyson, who had had an experience of a year and three-quarters in the surgery. A dose was administered by Mrs. Jones on the afternoon of December 15th, and almost immediately after the child fell asleep, from which she could only be aroused with difficulty. Mr. Bean came to see the child, and recognised in it the effect of narcotic poisoning, treating her accordingly. The child died about noon the next day. Mr. Edward Davies, F.C.S., of Liverpool, examined the medicine, and found it to contain chloral, morphia, sugar and colouring matter. He said he tested for antimony, but found none. He estimated that there was not less than one-fifteenth of a grain of morphia in each teaspoonful.

Dr. Bean was re-examined, and asked if he could now offer an opinion as to the remote cause of death, seeing that morphia had been proved to be in the bottle. He replied that the morphia would account for the comatose state in which the child was found, but the relapse generally partook of the symptoms of coma, though there might be cases in which the coma had disappeared, and the relapse had been followed by convulsions. The force of the morphia, if any was administered, would appear to have been spent before the relapse. If the child had died during the comatose state he could have expressed a positive opinion, but convulsions often came on without a person knowing why or wherefore.—Mr. Henry Jones said he did not think the effects of the narcotic had disappeared, because the child could never be kept awake. It invariably fell asleep, and wanted rousing, and Mr. Bean had said to Mrs. Jones, "From over-tenderness to baby you must not allow it to sleep more than a quarter of an hour at a time, because it might die yet."

The Coroner said the case, to a certain point, was clear. There could be no doubt—though Mr. Bean's evidence might have been a little clearer—that the child did suffer for a length of time from some narcotic poison, and where could that poison have come from but this bottle? The young man might not be aware that he had put any morphia in the bottle, and this led to the real point at issue. It was immaterial whether a person had natural talents or ability. When a person undertakes a duty he is bound to bring to its performance reasonable care and attention, and if he grossly neglects it he is amenable to the law. Medical men and chemists had been put upon trial for mistakes in dispensing drugs. It was for the jury to say whether they could come to any other conclusion than that Dyson put the morphia into the bottle. If he did it with intent to do harm, of course he was guilty of wilful murder; if he did not do it with that intent, but did it under gross carelessness, and without due precaution, then the law said he was guilty of manslaughter. But if, as reasonable men, the jury took a merciful view, and said it was one of those instances where a person, in the performance of his duty, took up a bottle containing poison and compounded it with a medicine to be swallowed by a human being, instead of putting in something from another bottle, the jury might assume it was done by misadventure, and not by gross carelessness, and the verdict would be death by misadventure, while the jury might, if they thought fit, append a censure to their finding.

The jury, after few minutes' consultation, returned a verdict of "Poisened from Morphia by misadventure, inadvertently compounded in a mixture given medicinally."

The Coroner expressed his surprise that the jury had not coupled with the verdict a severe censure on the young man, and expressed his intention of doing so himself, but as soon as the verdict was given the young man hastily left the room and could not afterwards be found.

LAW AND POLICE.

SHOULD AULD ACQUAINTANCE, ETC.

BETTS v. WILMOTT.—This was an appeal by the plaintiff from a decision of Vice-Chancellor James, dismissing the bill with costs.

The suit related to the well-known and much-litigated patent of Mr. Betts for a new material, consisting of a

combination of lead and tin, to be employed in the manufacture of metallic capsules for covering and stopping the necks of bottles. The defendant, a chemist, in the Borough, had sold to an agent of the plaintiff a bottle of Rimmel's toilet vinegar, with a capsule which was alleged by plaintiff to be an infringement of his patent. It appeared that the plaintiff not only manufactured capsules under his patent in England, but had also an agency for their manufacture at Bordeaux. On behalf of the defendant, the case was raised that there had been no infringement, as the Paris house of Eugène Rimmel was in the habit of purchasing capsules from the plaintiff's Bordeaux agency, and it was not proved that the capsule complained of was not one of those manufactured by the Bordeaux agency. The Vice-Chancellor, when the case was before him in June last, was at first inclined to dismiss the bill without costs, on the ground that, although the capsule in question might have been an infringement of plaintiff's patent, the defendant, who had sold it without any notion that he was infringing the patent, had been proceeded against without warning and with undue harshness. But upon having his attention called to the evidence, his Honour came to the conclusion that the plaintiff had not established any case of infringement at all, and dismissed the bill with costs. Mr. Willcock, Q.C., Mr. Grove, Q.C., and Mr. Everitt were for the appellant; Mr. Kay, Q.C., Mr. Eddis, Q.C., and Mr. Langley were for the defendant.—The Lord Chancellor, without calling on the defendant's counsel, said that the case was free from doubt. The onus of proving the infringement was thrown upon the plaintiff, and he had not established his case. A plaintiff must not only show that the article complained of was made according to his patent, but must swear positively it was not made by him. The plaintiff had houses in France in addition to his house in England. Suppose he had three in England—one in London, one in the North, and one in the West. In order to prove that an article was an infringement he must call the person having the control of each house. But the plaintiff here, being cross-examined, admitted he had a house in France, but would not swear that the article complained of was not made by his French house. Then if the article be sold by his agents in France, that carried with it the right to use it anywhere, unless limited by agreement. The appeal must be dismissed, with costs.

THE SOURCE OF A SAUCE.

LAZENBY v. WHITE.—The object of this suit, which was instituted by Mr. Lazenby, of 6, Edward-street, Portman-square, well known as the manufacturer of Elizabeth Lazenby's Harvey Sauce, was to restrain the defendant from selling Harvey Sauce in bottles with labels of such a character as to lead the public to believe that it was the sauce of the plaintiff's manufacture, or that it was the original Lazenby's Harvey Sauce. The defendant carries on business in the neighbourhood of Covent-garden, under the firm of Marshall and Son, his predecessors in the business having been Messrs. Marshall and Son. The original inventor of the Harvey Sauce was one Harvey, who, towards the end of the last century, kept the Black Dog Inn at Bedfont. He gave the receipt for the manufacture to Elizabeth Lazenby, who was the grandmother of the plaintiff, and who carries on now in succession to her the business which she carried on in her lifetime. The defendant alleged that he had purchased the receipt from which he made his sauce from one Charles Lazenby, who was also a grandson of Elizabeth Lazenby, and who was formerly in the defendant's employ. The appearance of the labels on the defendant's bottles was very similar to that of those used on the bottles of the plaintiff, though in the one case they were signed "Charles Lazenby," and in the other "Elizabeth Lazenby." The plaintiff's bottles, however, had on the neck a red and green label, which was wanting on the defendant's bottles. It appeared that in 1858 the plaintiff in another suit obtained an injunction against the defendant's predecessors, restraining them from using labels resembling those of the plaintiff. Some slight alteration was made, and the plaintiff took no further active steps to enforce the injunction. This, the defendant insisted, amounted to acquiescence on the part of the plaintiff, and entitled the defendant to assume that the plaintiff was satisfied with what had been done, and in this belief he said

that he had purchased the business of his predecessors, and he contended that he was justified in believing that the plaintiff would not interfere with him. The Master of the Rolls, having granted an injunction, the defendant appealed.—Sir R. Baggallay, Q.C., and Mr. Homersham Cox were for the defendant; Mr. Jessel, Q.C., and Mr. Lindley were for the plaintiff, but were not called on.—Lord Justice James said it might be assumed that the name "Harvey Sauce" was not a trade-mark, but that it was open to any one to use that name. Any person, therefore, whose name was Lazenby might manufacture and sell "Harvey Sauce," and might call it "Lazenby's Harvey Sauce." The decision of the Master of the Rolls was that the defendant had no right to represent his sauce as being that of the plaintiff, nor as the original "Lazenby's Harvey Sauce," inasmuch as the plaintiff alone was entitled to represent himself as the successor to Elizabeth Lazenby, or as the proprietor of the original "Lazenby's Harvey Sauce." The defendant admitted that he had used a label which the Court had had considerable difficulty in distinguishing from the label which was forbidden by the decree in the former suit. The defendant's case, however, was that there had been acquiescence on the part of the plaintiff—that, in fact, he was misled by the acts of the plaintiff. This case was not raised by the answer, and his Lordship was satisfied that the defendant had not been misled at all. On the contrary, he bought the business with full notice that this was a most fraudulent imitation of another man's trade-mark. The defendant had continued the use, which he must have known to be wrong, and he was properly restrained by the Master of the Rolls from so doing. There was nothing to prevent the defendant from representing himself as the proprietor of a Harvey Sauce manufactured from a receipt communicated to him by a Charles Lazenby, who was a grandson of Elizabeth Lazenby, but he must do nothing to represent himself as proprietor of the plaintiff's sauce. The appeal must be dismissed with costs.—Lord Justice Mellish was of the same opinion.

THE SCIENCE OF MEDICINE.

George Jackson and Alexander Julius, medical students, living in Milman-street, were charged with wilfully damaging two bell-pulls, value 10s. The complainant, Mr. Giles Yarde, chemist, Lamb's Conduit-street, stated that in consequence of a violent ringing at his bells after midnight, he went into the street, and found Julius a little way off. He was drunk, and Jackson was laughing at him. Complainant seized hold of Julius, who escaped, after a struggle, but was at last captured by complainant, who gave him into the custody of Buttell, 145 E. The constable found the two bell-pulls (which had been completely wrenched off) in his pockets. Jackson was also taken in charge. Another bell-pull and knocker were found in the street, but there was no evidence to show that the defendants were connected with them. In consequence of the insufficiency of evidence against Jackson he was discharged after a severe caution by Mr. Vaughan, who sentenced Julius to pay a fine of £5 and 10s. for the damage. The 10s., at the request of the prosecutor, who did not wish to press the charge, was placed in the poor-box.

SUBURBAN COURTSHIP.

HANNA (BY HER NEXT FRIEND) v. WALTON.—Mr. Croome was counsel for the plaintiff; Mr. M. Chambers, Q.C., for the defendant. This was an action for breach of promise of marriage. The plaintiff, a young woman 20 years of age, was a daughter of a warehouseman at Liverpool. The defendant was a chemist at Notting-hill, and made the acquaintance of the plaintiff, who lived at a pastrycook's opposite his (the defendant's) shop, and it was alleged that while she lived there he had frequently taken her to places of entertainment. Eventually, she came to live with him as housekeeper. An improper intimacy had taken place between them, she affirming that he had given her wine which had rendered her insensible. She said she would go to Liverpool, but the defendant persuaded her to remain, and said he would marry her. This induced the plaintiff to remain. She lived with him for 18 months after this. In October, 1869, she was delivered of a child. She still remained with him. In July, last year, the defendant became tired of her, and treated her with violence, but in

the previous month the plaintiff's mother came to town and saw the defendant, who told her he would make the plaintiff his wife. The plaintiff afterwards went out as a wet nurse, but afterwards returned, and lived with the defendant until his conduct was such that she was obliged to leave him. The defendant had told her that he had £300. He refused to fulfil his promise, and she brought this action for damages. The plaintiff, her mother, and other persons swore that the defendant had said he should marry the plaintiff. The defendant admitted that he had been intimate with the plaintiff, but he denied the outrage and the promise to marry. It was false that he had told her mother, or any other person, that he would marry her. He had paid all the expenses of her confinement. The mother had asked him if he intended to marry her daughter, and he had distinctly told her he would not. Eventually the plaintiff told the defendant that her mother said she knew a widower who would marry her, and he gave her an outfit, paid her passage, and gave her £5, and sent her to Liverpool. She had pawned his clothes and his watch in his absence, and she had made disturbances at his house since she had left. The learned Judge having summed up, the jury gave a verdict for the plaintiff—Damages £100.

EPAPHRODITUS STOPS THE WAY.

At Bow-street, Charles Gerard, described as a teacher, of 50a, Lincoln's-inn-fields, and Reuben Newport, a printer, were charged with having incited Epaphroditus Eatley to steal a copy of one of the examination papers of the Apothecaries' Company, and with having received the same, etc. Mr. Mullens conducted the prosecution, and Mr. G. Lewis, of Ely-place, defended the prisoner Gerard. Mr. Abrahams appeared for Newport. Mr. Mullens explained the nature of the alleged offence, observing that the object for which the paper was sought was to enable the defendant Gerard to "coax" one of his pupils prior to the day fixed for the examination of the students. Epaphroditus Eatley deposed that he was a proof-puller in the employ of Messrs. Gilbert and Rivington (printers to the Apothecaries' Company), St. John's-square, Clerkenwell. Rather more than two years ago the prisoner Newport sent a message to him by a boy to meet him at the Coach and Horses public-house, in the neighbourhood of the printing-office. Witness had never seen him before, but found that he was in the printing trade also. Newport told him that he wanted to say something very private and confidential, and then produced from his pocket a copy of one of the printed examination papers of the Apothecaries' Hall. He asked witness if he could get copies for the next examination, if he were paid well for his trouble, adding that it would never be known. He offered £5 for a copy. Witness said he would think it over, and appointed to meet him again. In the meantime he reported the interview to his employers, and with their sanction he kept the second appointment, when he was taken by Newport to the chambers of the other prisoner, Gerard, in Lincoln's-inn-fields, on the top floor. Newport introduced him to Gerard as the person who wanted the examination papers. Witness said he had never done anything disgraceful yet, and declined their proposals. They seemed surprised, and begged him to keep the affair quiet, but he reported this interview to his employers. About seven months after this, Newport met him again accidentally, and alluded to the subject, saying it was a pity witness did not procure the paper for Gerard, as it would have been a good thing for him. In September last, when witness was spending an evening at the Eagle Tavern, Newport came up to him, and again pressed him to oblige Mr. Gerard, promising him £10 if he would get a copy of the next examination paper in January. Witness reported all these interviews to Messrs. Gilbert and Rivington, his employers, and eventually, with their sanction, and with the connivance of the police, he went on January 11 with Newport to the chambers of Gerard, and delivered a copy of the paper required, on receiving £10 in gold from the prisoners. This transaction was reported to Inspector Mulvany and Sergeant Butcher, and the prisoners were taken into custody. Mr. Rivington was next called, and stated that the last witness, who was in his employ, made frequent communications to him respecting the interviews with the prisoners. Witness had acted upon the advice of the police in "arranging" this case. Inspector Mulvany deposed that he was a detective,

and watched the parties during the frequent interviews. He proceeded to Gerard's residence during his last interview with Eatley, who was searched before leaving home, and was entrusted with two examination papers to sell to Gerard. Witness surprised Gerard, and caught him with the papers in his hand, and Eatley produced the £10 which he had received from Gerard, and which was marked in presence of both the prisoners. Witness told them who he was, and, with the assistance of Sergeant Butcher, took them both into custody. One of the officers of the Apothecaries' Company alleged that he always received the examination papers from the printers, and took every precaution to let none of the students have them until the day of the examination. For the defence of Gerard, Mr. Lewis, in an elaborate speech, said he did not deny that the prisoner had been guilty of gross impropriety, but he contended that the charge did not amount to a felony. His client was a most respectable and well-educated man. He had incited (very improperly, it must be admitted) Eatley to procure certain information, but not to steal. One of Gerard's pupils had failed to pass the preliminary examination, and his father declared that, if he failed again, he would assist him no further. Gerard was, therefore, most anxious to be able to assist his pupil to translate certain sentences which were considered necessary in medical examinations. He hoped Mr. Flowers would deal with the case summarily. Mr. Abrahams contended, on behalf of Newport, that he was working innocently for Mr. Gerard. Mr. Flowers determined to commit both prisoners to the Old Bailey to take their trial. Mr. Flowers consented to take bail—two securities in £50 for each of the prisoners.

Provincial and Foreign Reports.

[We shall be glad to receive from all parts of the world items of interest to our readers. Correspondents who favour us with reports of local meetings, etc., will please to condense them as much as possible; and when local newspapers are sent, we shall be glad to have the passage intended for our notice specially marked.]

GLASGOW.

GLASGOW CHEMISTS' AND DRUGGISTS' ASSOCIATION.— SEVENTEENTH SESSION.

THE seventh meeting of the session was held in Anderson's University on Wednesday, the 11th inst., Mr. T. Davison, President, presiding. The Secretary announced the receipt of the *Pharmaceutical Journal* and *Chicago Pharmacist* as donations. Messrs. Dickie and Crocket were re-elected, and Messrs. Brodie, McAuley, and Wallace elected members.

R. CARTER MOFFAT, Esq., Ph. D., F.R.S.A. (hon. member) then delivered a short but highly interesting lecture on "The Detection of Alum in Bread." He explained some of the many processes recommended by chemists for this purpose, stating that for many years it had been one of the most difficult problems to solve. He (the lecturer) had been engaged some months ago, professionally, to report as to whether alum was really present in some breads, as alleged. His attention was thus drawn to the untrustworthiness of some of the tests and the awkwardness of others; and after performing about two hundred experiments, the matter seemed to him to be as far from solution as ever. He had, however, come upon the process known as Mr. Horsley's, of Cheltenham, which recommends the bread to be placed in vinegar for a short time, the vinegar to be strained off, and a little ammonia added to the clear liquor, to neutralise the acid. An alcoholic solution of logwood was then added, which, it was stated, gave the liquor a blue colour when alum was present. Fourteen loaves had been given him to test, and with Mr. Horsley's process every one of these contained alum; but, in experimenting further, he found that the blue colour was produced when no alum was present, and that the most reliable test for detecting the presence of alum either in bread or flour was the simple alcoholic solution of logwood, without any of the burning, boiling, or other processes. One hundred and twenty grains of chip logwood digested in eight ounces of methylated spirits for eighteen hours, then filtered, yielded a solution which,

when brought in contact with bread or flour free from aluminium, produced a pale yellow or straw colour, but a dark red when aluminium is present. With this test he had found that only one of the fourteen loaves contained alum, showing that alum is not used so extensively for the purpose of whitening bread as has been supposed by many. The lecture was illustrated by some interesting experiments, and at the conclusion a hearty vote of thanks was awarded the lecturer.

The proposed poison regulations were then considered, and in course of a short discussion—in which the feeling seemed to prevail that chemists generally could not object to some regulations being made in regard to the matter—it was thought advisable to oppose them becoming compulsory until such time as the Government could see fit to place the same restrictions upon surgeons and others who keep open shop for the dispensing of medicines. A member stated that if druggists would agree to the regulations independent of the surgeons altogether, the public would have greater confidence in going to a chemist's for their drugs; but the idea could not be entertained by the majority, as surgeons who had shops never allowed their prescriptions to be dispensed at any other place than their own shops if they could avoid it, and further, because in many of the large towns in Scotland, surgeons had the cream of the drug business in their hands; in Glasgow especially, where fully two-thirds of the drug-retailers were medical practitioners, and who, it was understood, would be entirely exempt from the restrictions. The President and Secretary were instructed to communicate with some of the other associations, to ascertain what action was being taken by them; and also to write to the Medical Department of the Privy Council, explaining the position in which the Glasgow chemists would be placed in the event of the regulations becoming law. The discussion was then adjourned till next meeting.

The eighth meeting was held in Anderson's University, on Wednesday evening, 25th January. Mr. T. Davison, President, in the chair. There was a very large attendance of members. After the minutes of last meeting had been read and approved of, Messrs. Thos. Hart, John Dunlop, W. Halley, A. Miller, McDonald, and Wilson, were elected members. Dr. Moffat then made some interesting remarks regarding the properties and uses of the new antiseptic chloralum, which were highly appreciated by the members. Mr. J. F. Wilson afterwards brought forward his motion on early closing, Mr. Fairlie seconded the motion, on the condition that the appointment of the committee be postponed till after the Annual Festival, which was agreed to. The discussion on the proposed Poison Regulations, which had been adjourned at the last meeting, was then proceeded with. The President read a letter he had sent to the Medical Department of the Privy Council, and the reply which he had received, of which the following are copies:—

"71, St. Vincent-street, Glasgow,
"16th January, 1871.

"SIR.—As President of the Glasgow Chemists' and Druggists' Association, permit me to direct the attention of the Right Honourable the Lords of her Majesty's Privy Council, as to the keeping, dispensing, and selling of poisons.

"Glasgow, with a population of above 500,000 inhabitants, has about sixty pharmaceutical chemists and chemists and druggists, and about 120 physicians and surgeons, who keep open shop for the retailing, dispensing, and compounding of poisons.

"The proposed regulations for the keeping of poisons will only apply to the sixty pharmaceutical chemists and chemists and druggists, the 120 physicians and surgeons who keep open shops being exempt from the operation of the Pharmacy Act, 1868, by the Amended Act, 11th August 1869.

"As the regulations for keeping, dispensing, and selling of poisons, are required for the protection of the public, may I hereby suggest that the Right Honourable the Lords of her Majesty's Privy Council co-operate with the Council of the Pharmaceutical Society, and obtain a Bill that will include under the Pharmacy Act, physicians and surgeons, hospitals, infirmaries and dispensaries, and all who keep open shops for the selling, dispensing, and compounding of poisons.

"The opposition to compulsory regulations by chemists and druggists throughout the country, is almost entirely

owing to the liberty granted to physicians, etc., who keep open shops to act as they think proper.

"I am, Sir, your obedient servant,

"THOMAS DAVISON."

"To John Simon, Esq., F.R.S., D.C.L.,

"Medical Department, Privy Council Office,

"8, Richmond-terrace, Whitehall, S. W."

(Reply.)

"Medical Department of the Privy Council Office,

"January 24th, 1871.

"SIR.—I am directed by the Lords of her Majesty's Council to acknowledge the receipt of your letter, suggesting the propriety of extending the operation of the Pharmacy Act, so far as concerns regulations to be made under it as to keeping, selling, etc., of poisons to physicians, surgeons, and others who keep open shop for the sale and dispensing of poisons.

"My Lords direct me to say that should an opportunity occur for such legislation as you propose, your suggestion shall have the most careful consideration.

"I am, Sir, your obedient servant,

"JOHN SIMON.

"T. Davison, Esq.,

"71, St. Vincent-street, Glasgow."

In course of the discussion which followed the reading of the letters, it was thought advisable to oppose the regulations in the meantime, in so far as Glasgow was concerned, and an influential committee was appointed to draw up a memorial on the subject, to be presented to the Council of the Pharmaceutical Society at the Annual Meeting in May next.

LEICESTER.

CHEMISTS' ASSISTANTS AND APPRENTICES' ASSOCIATION.

ON Thursday evening, the 2nd instant, the members of this Association held their annual supper at the Wellington Hotel, Granby-street, when about twenty-five sat down to an excellent repast. The chair was occupied by Mr. J. W. Clark, and the vice-chair by Mr. F. Parsons.

Among the toasts of the evening, Mr. H. NETTLESHIP proposed "Success to the Leicester Chemists' Assistants and Apprentices' Association." He said it was a pleasure to him to see the interest which the apprentices were taking in a Society formed for their advancement in chemistry and pharmacy. He then contrasted the position of the members of the Society with that which was occupied by apprentices forty years ago, who had to obtain a knowledge of pharmacy as best they could, with none of the helps which they now had, when similar societies to their own enabled young men to prepare themselves to pass successfully the examinations of the Pharmaceutical Society. He thought no country had a better class of chemists and druggists than England (hear, hear); but such institutions as they were now met to celebrate would tend to increase their efficiency. He begged to propose the toast, coupled with the name of Mr. Joseph Young, President of the Society (applause).

Mr. YOUNG, in responding, thanked the honorary members who had honoured them with their presence that evening. Few associations could boast of greater success than the one of which they were celebrating the anniversary that night. The committee had availed themselves of the opportunity offered by the Pharmaceutical Society, and during the past year many of their members had successfully passed the examinations of that Society. He believed their Association had done, and was doing, a fair share of good.

The VICE-CHAIRMAN proposed "Prosperity to the Pharmaceutical Society of Great Britain." He thought all would admit that they had received great benefits from that Society, and that it had done much for the welfare of the chemists and druggists of England (cheers).

Mr. S. G. COX had great pleasure in responding on behalf of the Pharmaceutical Society, of which he was a humble member. He considered that the Society had done a great deal of good to the chemists and druggists of Great Britain, and that its rules had tended to maintain a good class of chemists in the country.

Mr. JOSEPH YOUNG proposed "The Honorary Members of the Association," without whose assistance they could not have had that pleasurable evening. He coupled with the toast the name of Mr. Clark, their Chairman that evening (cheers).

Mr. CLARK said, in coming there that evening it struck him as something wonderful that the Society had made such rapid progress in the two years it had been in existence, that the members could now hold their anniversary in one of the best hotels in the town. He should indeed have been glad of such means as were offered by this Association when he was an apprentice. He then related several anecdotes, to show the different position which the trade now occupied to what it did when he first went to it. Two generations ago it was thought a bold step for a third chemist and druggist to commence business in the town; but now he supposed they numbered upwards of forty. He had not thought to see in Leicester an Association like the present, which was calculated to raise the members in their several positions. He was pleased to see the Society so prosperous, and hoped its prosperity would go on and increase exceedingly.

Mr. F. PARSONS suggested the establishment of a Book Society in connection with their Association, and thought such a thing would be of great advantage to the members. He also thought they might obtain the use of instruments in their studies, which they might not be able to buy; and on his own part offered the use of a spectroscope to the members at any time they might wish to have it (applause).

Mr. BURZARD proposed "The Committee," to which

Mr. BUTLER returned thanks. He had been a member of the committee since the establishment of the Society, and the result of their exertions they had witnessed that evening. He thoroughly endorsed the remarks of Mr. Parsons, as to the value of a value of a Book Society in connection with their Association. They must remember that the members had duties to perform as well as the committee, and if they were well performed he had every reason to believe the Society would continue its successful and useful course (applause).

Mr. W. B. CLARK proposed "The Health of Mr. Joseph Young, the esteemed President of the Association," who briefly responded.

The other toasts proposed were "The Chairman," "Mr. T. Cooper, the local Hon. Secretary of the Pharmaceutical Society," and "The Ladies" after which the proceedings terminated.

LIVERPOOL.

LIVERPOOL CHEMISTS' ASSOCIATION.

THE fifth general meeting was held on December 22, 1870; the President, Mr. John Abraham, in the chair.

Mr. Joseph Roberts was elected a member. Mr. W. T. Case was elected an associate.

Several donations to the library were announced.

Mr. ALFRED H. MASON read a paper upon "Chloral and its Preparations," illustrated by experiments.

A discussion followed, in which the President, Dr. Nevins, Mr. Davies, and the Secretary took part.

The sixth general meeting was held on Thursday evening, January 19, 1871; the President, Mr. John Abraham, in the chair.

Donations to the library and museum were announced.

Mr. JOHN SHAW announced that £32 15s. 4d. had been placed to the funds of the Association from the Local Committee for entertaining the members of the British Pharmaceutical Conference.

Mr. EDWARD DAVIES, F.C.S., drew attention to a case of accidental poisoning with morphia which occurred at Mossley, and detailed the result of his analysis of the medicine given to the child. He also made some remarks upon the evidence given at the inquest, and the experience of the physician's assistant as a dispenser.

The SECRETARY called attention to the report of Dr. Lankester, published in the *Lancet* of January 14, of the inquests held in 1868-9 upon suicidal cases, and thought that regulations for the storing of poisons by chemists could not prevent such cases of poisoning as those mentioned.

Mr. THOMAS F. ABRAHAM stated that the results of Mr. Mason's experiments, as detailed by him in his paper read at the last meeting, induced him to make a few experiments upon the sample classed as No. 5, which he described.

The conclusions he drew from his experiments were that sample No. 5, as far as the ammonia test shows, was quite equal to No. 1, but that the instructions given by Mr. Umney are insufficient in that they do not prescribe the temperature of the water into which the tubes are to be plunged.

A discussion followed, in which Messrs. Davies, Abraham, the President, and Secretary took part.

Mr. ALEXANDER FRASER read a paper, showing in an interesting and practical manner the results of his experiments with some officinal and non-officinal remedies. He suggested that, in the preparation of granular citrate of magnesia (so-called), if sugar was added to freshly prepared carbonate of magnesia, while moist, the magnesia would be presented to the citric acid in a form more readily acted upon than either the dry carbonate or the calcined magnesia; and should this be found successful, the name would to some extent indicate the composition of the article.

He called attention to the "Students' Corner" in the *Chemist and Druggist*, and earnestly recommended it to the younger members of the Association. Speaking personally, he had been led to study many things, and to view the same thing in many ways, which without these questions he never would have thought of doing.

He described the manufacture of sulpho-phenates.

He called attention to an article which appeared in the *Chemist and Druggist*, Nov. 15, 1870, p. 320, and advocated the use of concentrated infusions, etc., as much more satisfactory and uniform than fresh ones, and thought they should be included in the next issue of the *Pharmacopœia*; at the same time, he did not think anyone was justified in using concentrated infusions in dispensing during the reign of the present *Pharmacopœia*, as the *Pharmacopœia* formulae must be used—there is no choice to the conscientious dispenser. A future edition may be different, but a *Pharmacopœia* for the time being stands in the position of an interpreter between the medical man and the dispenser, and *private judgment* ought to be entirely disallowed.

[If Mr. Fraser will kindly read again the Editorial Note which he has here criticised, he will find that he has construed the meaning of the writer erroneously. The use of concentrated infusions was not therein recommended as preferable to those freshly made; but the prevalent practice of making fresh infusions and keeping them to the utmost limit of time was strongly condemned. Mr. Fraser will agree probably that a concentrated infusion is a more creditable preparation to use than one in which, though nominally fresh, decomposition may have set in, and the fungoid growth in it has to be removed by filtration. Neither will Mr. Fraser dispute that this is an altogether impossible occurrence in houses where it is the rule to employ fresh infusions.—ED. *Chemist and Druggist*.]

He instanced several cases in which cheaper medicines were substituted by *private judgment* for officinal ones—such as the substitution of foreign orange peel for English; citrate of iron and quinine bought at a price for which the B.P. article could not be made; chloroform prepared from methylated spirit for that made from pure spirit; the substitution of foreign essential oils in spirits although the *Pharmacopœia* orders oils distilled in Britain; and lastly, the substitution of hydrate of chloral bought for a price at which that prepared from the formulary of Liebreich could not be produced. If *private judgment* did not partake of such qualities as these, he would respect it—for instance, if it took the shape of an earnest desire to make and dispense drugs better than anybody else, without regard to cost, providing they are as near perfect as our fallible nature can make them. He thought men whose *private judgment* consisted in this were daily increasing. The British Pharmaceutical Conference would do much to bring this about. Of course these remarks did not apply to manufacturing chemists—for instance, they are at perfect liberty to make

alomei any way they choose, provided the result is calomel pure and simple, nothing more and nothing less.

A short discussion followed. A vote of thanks was passed to the author, and the members adjourned.

THE CONVERSAZIONE.

Professor Roscoe on the recent Solar Eclipse.

The eleventh conversazione of the Liverpool Chemists' Association was held, on Feb. 2nd, at the Royal Institution, Colquitt-street, and was very numerously attended. The entire building was thrown open to the company. The Museum of Natural History, Geology, and of the Chemists' Association, the Gallery of Art which was formed to illustrate the History of Art, by the late Wm. Roscoe, was open for promenade, and numerous objects of scientific interest were exhibited, including the following:—Messrs. Chadburn and Son: Model fluid telegraph instruments, electric clocks, graphoscopes, cathographs, etc. Messrs. Knott and Co.: Graphoscopes, stereoscopes, etc. Messrs. Elkington and Co.: Works of art in bronze and electro-plate. Mr. Keith practically illustrated the process of carbon printing. The members of the Liverpool Microscopical Society and of the Liverpool Natural History and Microscopical Society, exhibited in the bird room, selections of objects in various departments of science. By permission of the library and museum committee, Mr. T. J. Moore exhibited recent additions to the museum, including maigre fish and skeleton, aardvark and skeleton, etc., also specimens of animals, the products of which are used as drugs and perfumes. Mr. J. Tyerman, of the Botanic Gardens, sent some living plants illustrative of these subjects. Tyndall's theory, explaining the blueness of the sky, illustrated by Brücke's experiment, with the aid of the electric light, was exhibited by Mr. Albert H. Samuel. By permission of Major Bickerton (officer commanding), the band of the First Lancashire Artillery Volunteers was in attendance, and performed at intervals during the evening. Refreshments were supplied in the library and committee rooms. Among the company we noticed Mr. John Abraham, President of the Association; Professor Henry E. Roscoe, F.R.S.; Mr. George Melly, M.P.; Major Bickerton, Captain Stewart, Dr. Brown, Dr. Nevins, Rev. J. Banner, Rev. W. Banister, Messrs. N. Caine, C. E. Rawlins, jun., Fletcher, Mott, Dawson, Davidson, Newton, Chalmers, Whittle, Morton, Carter, H. S. Alpass, Williams, Dallinger, Cole, Drysdale, and A. H. Mason, the hon. Secretary.

In the course of the evening the entire company assembled in the lecture theatre, for the purpose of listening to an address by Professor Roscoe, illustrated by experiments, on

“SOLAR CHEMISTRY.”

Mr. ABRAHAM occupied the chair, and, in introducing the distinguished Professor, said that the institution in which they were then assembled was opened fifty years ago by William Roscoe, and had ever since been the home of science in Liverpool, although Liverpool had multiplied its population four times during that period (applause). It was not necessary to tell a Liverpool audience much about Roscoe, they all knew that he had been a most distinguished ornament of literature which the town had ever produced (applause). Not only did he open that institution of which he was one of the originators, but he was one of the most prominent originators of the Athenæum, and did every thing in his power to foster literature and science in the town (applause). That institution was specially intended as a school of science, and of Roscoe's taste for art they had an excellent illustration in the collection of pictures on the other side of the street in the building called the Gallery of Art, which was, he (Mr. Abraham) fancied, the ugliest building in which a gem was ever before enshrined. At the entrance to the room which contained the paintings was a noble statue of Roscoe, by Chantrey, and there was also in the upper part of that building a very beautiful bust of him. Professor Roscoe, who was with them that evening, might be introduced on his own account entirely. If he had never had a grandfather (laughed) his name would have needed no introduction. Since the time of his grandfather the bounds of science had been greatly enlarged; we were able actually to unfold the wonders of the sun, the planets, and even the

fixed stars, and how that came about Professor Roscoe would tell them that evening (applause).

Professor Roscoe, on rising, was loudly cheered. After thanking the meeting for the exceedingly flattering manner in which they had received him, and thanking the Chairman for the kind way in which he had spoken of his honoured grandfather, he said it gave him great pleasure to be able to do anything to carry out the views he so long entertained. He then went on to say that the science of astronomy was the most important that they had heard of during the last many years. The sun was an object which, from the earliest days of mankind, had attracted attention and even worship, and, beyond the general information they had received upon the subject, very little was known concerning the sun up to within the last few years. But, quite recently, knowledge concerning this great luminary—the great supporter of life and energy on the whole earth—had gradually increased. They now knew not only something concerning its physical constitution, but something even concerning its chemical composition, and they knew that the sun contained substances well known on the earth; that iron and magnesium, and many other metals and bodies, were present in the solar atmosphere. It did seem a marvel that such information could be obtained when it was recollect that the sun was situated at a distance of ninety-one million miles from the earth. The only medium of communication between this world and the sun was light and heat—those life-giving rays which passed from his body, and fell in minute specks upon this small earth. It was by examining the kind of light which the sun emitted that they could tell anything of the composition of the solar mass. Therefore, they would have to examine the character of the light, and see what was the lesson derived therefrom, to decipher the character of the rays and form an idea of what they really meant. After explaining that white light was a compound, whereas coloured light was a simple phenomenon, he said that if they had light of only one kind, or mono-chromatic light, they would be unable to see any colour at all, but it would appear of different degrees of shade. The Professor then proceeded, with the aid of a spectroscope, to illustrate the different characteristics of solar radiation—heating, luminous, chemically active rays, and the nature of solar spectrum. The glowing vapours of the gases were beautifully shown, as also were the broken spectrum caused by throwing lithium through the prisms, and the effect of thallium, discovered by Mr. Crookes, which was a bright green light due to the incandescent gas. He next volatilized several metals, such as silver, copper, cadmium, tin, and sodium, and showed the spectrum which each produced, observing that no matter how far distant a light was seen, it could be ascertained what metal produced it. The Professor then proceeded to illustrate with an oxyhydrogen lantern a magnified diagram, showing the construction of Kirchhoff's spectroscope, and exhibited diagrams of the spectrum of the solar system, as seen by the celebrated German astronomer, Fraunhofer. His next illustrations consisted of blue and orange-coloured stars, each of which showed a different kind of light, the lines in them and the sun being different, while those in the planets and the moon, which shone by borrowed lights, were the same as the lines of the sun, the stars being self-luminous. Kirchhoff came to the conclusion that metallic vapours existed in the solar atmosphere, and that the fact of the lines produced being in the sun was due to the presence of metals. To prove the exactitude of Kirchhoff's map, Professor Roscoe gave a diagram of the lines on Kirchhoff's own retina, side by side with a photograph taken by an American photographer named Rutherford. Since Kirchhoff's great discovery their knowledge of the sun had gradually increased. The learned lecturer next proceeded to give a few phenomena of a total eclipse of the sun. He said they were considered most marvellous, and were difficult of explanation. By means of several diagrams he illustrated the red prominences that were observed during a total eclipse, and stated that the Himalaya expedition in the year 1860 proved that those protuberances belonged to the sun. They consisted of glowing masses of hydrogen, and many of them were supposed to extend a distance of between 80,000 and 90,000 miles, and moved with wonderful rapidity. Speaking of the corona or white halo of light seen outside the sun during a total eclipse, whose irregular form extended into

space, the Professor said the result of the recent Eclipse Expedition was, on the whole, satisfactory; for in spite of bad weather, accidents, and mishaps, they had run the corona down at last, and could tell pretty well what it was. If, however, the astronomers had been favoured with fine weather, a series of observations would have been made at Syracuse, such as were not known before. Some of them went up Mount Etna, but saw nothing (laughter). For about half an hour before the eclipse a snowstorm set in, and half an hour after the eclipse was over they were in the most beautiful weather—the sun shining forth in all his brilliancy (renewed laughter). One feature, however, that they could not account for was the white light being thirty-one minutes away from the sun, according to a photograph that was taken, although it was not visible to the naked eye. After speaking of the great courtesy that was shown to the party by the American astronomers on the occasion alluded to, Professor Roscoe exhibited a copy of the diagram made by Professor Watson, an American, of the facts he discovered with the aid of a telescope. That gentleman, however, did not represent the outside light which was impressed on the photographic plate. Before the eclipse took place, Mr. Seabrooke, one of the party, who was armed with a powerful battery of prisms, examined the prominences, some of which were moving, while others were stationary. Comparing his map with the corona map of Professor Watson, they were found to correspond with each other, so that by drawing a line a little distance from the top of the prominences, they got an outline of the corona precisely similar to that delineated by Professor Watson. Therefore there was no doubt that the corona did belong to the sun, and that it was an outside solar observation. The light from the corona gave a spectrum containing bright lines, one of which was observed by an American astronomer in the eclipse last year in America, and the truth of his observations had been entirely borne out by the observations taken in Sicily, for there the bright line was found, and it was ascertained that it did not coincide with any other known elementary substance. Singularly enough, however, a similar bright line was found in the aurora borealis. Whether they were connected it could not be said; that was a difficulty which future observers would have to clear up. It had been enough for them during the last eclipse to fix the corona as an absolute entity—that it was something not merely produced in the eyes of the observers by irradiation of any glare, but was a portion of the solar body. Professor Roscoe concluded his interesting lecture by thanking the audience for the attentive manner in which they had listened to him. He resumed his seat amid loud applause.

A cordial vote of thanks was conveyed to the distinguished gentleman for his lecture.

Later in the evening, Mr. EDWARD DAVIES, F.C.S., Vice-President of the Association, gave a short but instructive lecture, with experiments, upon modern explosive compounds, such as white and other kinds of gunpowder, gun-cotton, nitro-glycerine, dynamite, picrate of potash, percussion shells, time fuses, and percussion fuses.

MANCHESTER.

MANCHESTER CHEMISTS' AND DRUGGISTS' ASSOCIATION.

An ordinary monthly meeting was held in the Memorial Hall, Albert-square, on Friday, February 3rd, at 4 p.m., Mr. Geo. S. Woolley in the chair.

Messrs. Berry, Eckersley, and Wharton were elected members, and Messrs. Woodcock, Spencely, and Bousfield associates.

A donation of three guineas to form a prize in one of the classes was announced from a member, Mr. T. G. Gibbons, and a resolution conveying the best thanks of the Association to Mr. Gibbons was carried with acclamation.

Mr. ROBERT HAMPSON then read a paper "On the Importance of some knowledge of Anatomy and Physiology to the Pharmacist." The following is a brief abstract:

The pharmacist is expected to be fully alive to the requirements of the physician, and conversant with the *modus operandi* of remedial agents. The production of pharmaceutical preparations suited to the varied manifesta-

tions of disease, necessitates some knowledge of the construction and functions of the human organism. Such knowledge would greatly tend to impress upon the dispenser the absolute importance of accuracy in compounding medicines, and the danger and disadvantage of using adulterated drugs, or drugs not reaching the officinal standard of potency, the definition of a poison, the perils of an excessive dose, and the necessity for the use of all suitable safeguards to prevent error or disastrous misadventure; it would assist in putting to flight the mistaken notion that the rigid machinery of law, its penalties and needless rude encroachments, are required to ensure the safety of those who deal with us.

It might be argued by some that this kind of knowledge would extend the practice of prescribing by chemists. He (Mr. Hampson) entertained an opposite opinion, founded on the conviction that this particular information, which reveals to us that our bodies are indeed "fearfully and wonderfully made," has a tendency to prevent rather than foster the rash assumption of duties which are foreign to our special business. Mr. Hampson illustrated his subject by some remarks on the minute anatomy of the skin and mucous membrane and their use on the animal economy, and also on the various methods of introducing medicines into the circulation. In conclusion, he advocated that a short introductory course of lectures, embracing a clear outline of anatomy and physiology, be given to pharmaceutical students.

A cordial vote of thanks was passed to Mr. Hampson for his interesting paper.

Some discussion then took place on the latest phase of the "poison regulations question," and a resolution proposed by Mr. Louis Siebold, and seconded by Mr. Mumhray, was carried—"That the consideration of the subject be referred to the Council of this Association, and that it be requested to take action thereon."

The Secretary called attention to a copy of the Year Book issued by the Pharmaceutical Conference, which he had placed on the table, and reminded those present that all apprentices and assistants, as well as men in business, were, on payment of the annual subscription of 5s., eligible for election as members of the Conference, by which they would be entitled to a copy of this valuable work.

A paper on Dispensing, by Mr. Halliday, was announced for the March meeting.

PHILADELPHIA.

AMERICAN JOURNAL OF PHARMACY.

Minutes of the Philadelphia College of Pharmacy.

A SPECIAL meeting of the College was held December 5th, pursuant to a call issued by the President, to receive and act upon the report of the Joint Committee appointed at the last meeting to consider the business interests of the *American Journal of Pharmacy*.

In the absence of the President, Vice-President Robert Shoemaker in the chair. In the absence of the Secretary, Thomas S. Wiegand was appointed Secretary *pro tem.*

The call for the meeting, stating its object, having been read, the minutes of the Joint Committee were then read, giving an account of their deliberations and the conclusions at which they had arrived.

It was then resolved—

1st. That the business pertaining to the journal shall be transacted at the College building.

2nd. That the *American Journal of Pharmacy* be published monthly.

3rd. That a business editor be appointed to attend to the advertisements, the distribution, and the accounts.

4th. That the Treasurer of the Publishing Committee be authorized to draw on the Treasurer of the College for the prime cost of journals supplied to members, and for exchanges.

On motion then adjourned.

THOMAS S. WIEGAND, Secretary *pro tem.*

A stated meeting of the College was held December 27 1870. Dillwyn Parrish, President, presiding.

The minutes of the last meeting and of the special meeting were read and approved.

The minutes of the Board of Trustees were read by the Secretary of the Board.

William Procter, junr., for Committee on Latin Labels, made a verbal report. After some explanatory remarks from members of the Committee, the subject of publishing further editions of the labels was referred to the Committee, with power to act.

A communication from the Horticultural Society regarding a botanical garden at Fairmount Park, was referred to the Board of Trustees.

The following communication was read:

To the Philadelphia College of Pharmacy:

FELLOW MEMBERS.—It is now thirty-four years since my connection with the *American Journal of Pharmacy* as a contributor commenced, and about twenty-five years as co-editor and editor.

During this period time and labour have been freely given to make the work a continuous record of the progress of Pharmacy at home and abroad. For many years it was a labour of love, and despite the great sacrifice of time occasioned by contributing to its pages, the labour was cheerfully given. Of latter years a change has occurred in this respect: the work has been continued regularly as a matter of duty, but it has ceased to be a pleasure. Under these circumstances, I desire to carry out an intention entertained for several years, and withdraw from the editorship.

In order to give the College time to select a successor, I have deemed it best to offer this my resignation at this meeting, to take effect at the annual meeting in March, when the stated time for electing an editor arrives.

Meanwhile every effort will be made to introduce the new order of things adopted at the special meeting of the present month, and to start the journal as a Monthly in its three first numbers, hoping that the College will then be ready to release me from further duty.

I need hardly say that it has required some effort on my part to thus voluntarily resign a position fraught with so many pleasant memories, and which has brought me in contact with a large number of professional brethren beyond the pale of our College, yet after deliberate consideration I believe duty to myself requires the step to be taken, not doubting that under the auspices of a new editor the Publishing Committee will be able to report a flourishing condition of the journal at the end of the coming year.

Respectfully,
WILLIAM PROCTER, JUNR.

December 27th, 1870.

The resignation of the editor of the journal gave occasion to expressions of regret at the prospect of losing the able hand which had for so many years guided the first and most widely known exponent of Pharmaceutical science in America; and, while feeling what the loss to the College would be, the members who were acquainted with Mr. Procter's earnest wish to be released from the editorship could not solicit from him a farther continuance of the labours of the office, and while accepting his resignation are unable to express their sense of the services he has rendered—a just estimate can better be found in the twenty-one volumes of the *American Journal of Pharmacy* which bear his name as editor.

On motion of Robert Shoemaker, the resignation of William Procter, junr., was then accepted.

On motion of Charles Ellis, the Chair appointed the following Committee to bring forward at the next meeting the name of a suitable person for editor, viz., Charles Ellis, William Procter, junr., John M. Maiseh, Charles Bullock.

Frames for the engraving of Jacob Bell, and of the photograph of Plough Court Laboratory, received from Daniel Hanbury, at the last stated meeting, were presented by William Procter, junr.

On motion then adjourned.

CHARLES BULLOCK, Secretary.
Am. Jour. Pharm. Jan. 2, 1871.

[We have read part of this communication (extracted in full from the first number of the New Series of the *American Journal*) with unfeigned regret. We are not aware what may have led to the resignation of the editorial chair by Mr. William Procter, junr., nor can we frame a conjecture

as to the meaning of the sentence, "the work has been continued regularly as a matter of duty, but it has ceased to be a pleasure." We can but give public expression to the profound respect with which Mr. Procter's labours have long been held amongst his English readers. The periodical, for many years conducted by himself, has been a model of representative and educational Pharmacy; possibly none has been more widely quoted, or more deservedly admired.—J. I.]

Fragments.

The Corporation of London has agreed to allow the A. B. C. Company to erect some works at their own expense to experiment on the purification of the London sewage by their special process.—Colonel Henderson has issued instructions respecting the disinfection of lodging-houses, etc., where fever or other contagious diseases have occurred. Calvert's carbolic acid is the disinfectant ordered.—It is announced that Dr. Hugo Schiff, of Florence, has obtained conia synthetically.—Dr. Lankester reports that one person in 12,000 commits suicide; five males to two females is the proportion. Women choose poison and drowning; with men, hanging and throat-cutting is most in favour. Cyanide of potassium is the most popular poison.—A writer in the *Lancet* says the application of a mustard poultice, before applying leeches, will induce them to bite much more freely. Half the number will be sufficient.—Mr. Macfie Campbell finds permanganate of potash, five grains to the ounce, an excellent injection in cases of gonorrhœa.—The Koh-i-noor if burned would yield sufficient carbonic acid gas to charge a dozen of soda-water.—Messrs. Fortnum and Mason have sent a beautiful specimen of rose-tinted honey to the South Kensington Museum. The comb is virgin, the wax almost white, the honey limpid, pure, and colour of red-currant jelly. It is obtained by artificial feeding.—It is said that the city of Buffalo (U.S.) is to be lighted with the oxy-hydrogen light.—Only one death from small-pox occurred in Ireland during last quarter.—The Parisians used the asphalt of their streets as fuel.—The Prussian Government has ordered 200,000 wooden legs.—Muriate of ammonia good for mumps. Twenty grains every three hours.—Alfred Wright, L.R.C.P. Ed. (Finchley), writes in the *Lancet* that oil of peppermint is a fine local anaesthetic in gout and neuralgia, applied with a camel's hair pencil.—A correspondent of the *Medical Press* has discovered arsenic in green kid gloves. Dismal news for people who are accustomed to eat gloves.—One of the French journals says that a society has been formed in Paris, now numbering more than a hundred members, each of whom declare that it is their wish that their bodies, after death, be used for the promotion of anatomical science.—139,271,150 gallons of petroleum oil were exported from the United States during 1870, being an increase of 38,490,922 gallons over 1869.—The *Boston Journal of Chemistry* states that much of the "jujube paste" sold in the shops is made of glue and molasses, or the same composition as is used for printers' rollers.—Chloral hydrate is recommended to photographers. Mixed with collodion, in the proportion of one per cent, it is found to give better results than the collodion alone will yield with a neutral silver bath.

Trade Memoranda.

AMONG new sauces, the "Oriental," manufactured by Mr. C. J. Edwards, of St. John-street-road, deserves mention. It combines a peculiarly rich flavour with the older favourite characteristics of these condiments.

ASSETS.—The following account shows the economy of bankruptcy on a small scale:—"The Bankruptcy Act, 1861.—In the matter of _____, of _____, a bankrupt.—Statement of the accounts to be sent to every creditor who has proved (see 130).—In the County Court of _____:—Receipts.—From sale of effects, £11 18s. 10d.; from debts,

£28 13s. 11d.; total, £40 12s. 9d. Payments.—For solicitor's bill, £11 4s.; for messenger's bill, £7 4s. 4d.; for registrar's and official assignees' fees, £7 13s. 7d.; for County Court fees on proceedings against debtors, £3 10s. 6d.; auctioneer's charges, £1 3s. 6d.; rent, £7 10s.; balance, £2 6s 10d.; total, £40 12s. 9d. —————, Official Assignee."

MESSRS. JOHN BAILEY AND CO., of the Albion Works, Salford, have added to the already extensive branches of their business, that of electric telegraph engineering, having purchased the concern of Mr. R. Dodwell, of Manchester, who has been for some time past exclusively engaged in fixing private telegraphs for the mining companies and manufacturers in the North of England. Messrs. Bailey have been able to secure the services of Mr. Dodwell as manager of this new department of their business.

AT Sheffield, on Monday, Jan. 16th, Mr. J. T. Dobb, druggist (President of the local Society of Chemists and Druggists), appeared in answer to a summons charging him with selling petroleum without a licence. In September, 1869, he applied for two licences for the sale of petroleum at his two places of business. He got the licences, which, however, allowed him to sell only forty gallons. These he refused to accept, and applied for a licence to sell two hundred gallons. This permission the committee of the Town Council refused to give him; since then he has been selling without any licence whatever. Fined £1 and costs.

DEATH has been very busy of late amongst the chemists in the North of England. A month or two ago, James D. C. Jackson, of Newborough, Scarborough, was suddenly called away in the prime of life—in fact, quite a young man. He leaves a wife and family of young children.—Within a few weeks of his death, Mr. Sewell, of the South Cliff, Scarborough, was taken away in an equally sudden manner. He had been in business in Sheffield for many years, and about two years ago he opened a very beautiful shop in "the queen of watering-places."—About the same time (in December) one of the most useful and energetic men in the North, Thomas Waller Gissing, of Wakefield, was suddenly carried away from his circle of usefulness; he had carried on business at Wakefield fourteen years. He was a great lover of botany, and published several small works on the local flora. One was entitled, "The Ferns of Wakefield and Neighbourhood," another "Materials for a Flora of Wakefield." He was a lover of the fine arts, a leading local politician, a town councillor, and lately interested himself in the establishment of a School Board in the borough. He was forty-one years of age, and leaves a large family to mourn his loss.—In the same week was carried off suddenly one of the best known men in the metropolis of the North, Mr. Hardcastle, senior partner in the firm of Taylor, Gibson, and Co., wholesale druggists, Bigg Market, Newcastle-upon-Tyne, at the early age of thirty-six. He was a man of Herculean proportions, and of great business capacity. Those who were brought in contact with him will not soon forget his homely bluntness and straightforward conduct.



IRISH LOGIC.

TO THE EDITOR OF THE "CHEMIST AND DRUGGIST."

SIR,—In the Pharmacy Bill for Ireland (a draft of which has been published in the *Medical Press and Circular*) which relates to the sale of medicines, poisons, etc., by unqualified persons, no notice appears to have been taken of the fact that every city, town, and village in Ireland is crowded with houses in which are sold the most destructive poisons known—namely, whisky, brandy, rum, gin, and other varieties, and, as a rule, almost without an exception, the sellers of these "medicinal" poisons are not possessed of any excess of ordinary intelligence fitting them to dispense

doses to the foolish patients who seek their aid. No; these dealers in poisons are only too anxious to sell all they possibly can to all who call, at all times and under all circumstances. If our legislators and authorities carry the Pharmacy Act into operation, will these sellers of poisons on a large scale be embraced?

Belfast.

J. C.

THE PILL QUESTION.

TO THE EDITOR OF THE "CHEMIST AND DRUGGIST."

SIR,—Some little difference of opinion having arisen as to the best manner of getting pills into the box, will you allow me a line or two upon the matter? I have a strong idea that the following simple method would be useful:—In the left-hand corner of the "tray" which receives the pills, let a hole the size of a shilling be made; a little shaking of the pills with the necessary powder, previous to withdrawing the receptacle alluded to, is all that is necessary, the pills will find their way into the box of themselves. The hole in the "tray," when the latter is pushed back into the machine, is like a "chip in a porridge," neither good nor harm.

Yours, etc.,

Maidstone, February 9th, 1871.

F.

PESSARIES AND SUPPOSITORIES.

TO THE EDITOR OF "THE CHEMIST AND DRUGGIST."

DEAR SIR,—In common with, I suppose, most chemists and druggists in casting suppositories in metal moulds, I have been annoyed by the butter of cacao adhering so tenaciously to the metal that frequently they could not be separated without spoiling. About two years ago it occurred to me that I might find a remedy, and, after experimenting with about half a dozen substances (including flexible collodion, which does not suit) I tried pure collodion with perfect success. I now, with a camel-hair pencil, brush over the holes in the mould (before pouring in the medicated cacao butter) with a mixture of collodion 3ss. and spirits of wine 3j. (methylated does just as well), and on opening the mould, after the composition concretes on cooling, the suppositories or pessaries either fall out or are detached by the slightest touch of the finger. 3jss. as above, if carefully used, will last long enough for dispensing about two gross (fifteen-grain) suppositories. Not the least valuable result of my discovery I consider to be the saving of all trouble in cleaning the moulds after using.

If you think this communication of sufficient interest or value to warrant its publication in your increasingly valuable journal, it is at your service for the benefit of the trade.

Yours respectfully,

ALEX. MACPHERSON, Druggist.

Stornoway, 7th February. 1871.



VARIOUS correspondents ask if some of our readers will kindly supply information as below. We shall esteem the courtesy, if any who are able will kindly reply.

B. L. W. wishes for a recipe for removing spots on linen, &c., caused by blue black writing fluid.

W. E. M. asks for a good amalgam for stopping teeth.

What is the most useful work on uterine diseases?

Another correspondent would be glad to hear of the best manual on horse and cattle medicines.

What is the composition of a white powder now being sold for the teeth which smells of carbolic acid?

Does anyone know anything of an article called "Pepsinator," which has been referred to in the *Sporting Times*?

C. (Wine-auton).—Messrs. Mottershead, of Manchester, will give you the information you require.

Inquirer.—It is not strictly legal to sell Steedman's powders separately, but we believe the Inland Revenue officers have given special permission.

THE DEATH OF LAVOISIER, 1794.—The spring sends its green leaves and bright weather, bright May, brighter than ever; death pauses not. Lavoisier, famed Chemist, shall die and not live: Chemist Lavoisier was Farmer-General Lavoisier too, and now "all the Farmers-General are arrested," all, and shall give an account of their moneys and incomings; and die for "putting water in the tobacco" they sold. Lavoisier begged a fortnight more of life, to finish some experiments: but "the Republic does not need such," then the axe must do its work.—*Carlyle.*

LIVELY.—Open an oyster, retain the liquor in the lower or deep shell, and, if viewed through a microscope, it will be found to contain multitudes of small oysters, covered with shells, and swimming nimbly about—one hundred and twenty of which extend but one inch. Besides these young oysters, the liquor contains a variety of animalculæ, and myriads of three distinct species of worms. Sometimes their light represents a bluish star about the centre of the shell, which will be beautifully luminous in a dark room.—*Journal of Microscopy.*

CONSUMPTION OF INTOXICATING DRINKS.—The following figures will show the quantity of spirits, beer, and wine, in gallons, consumed in the British Islands at intervals of fourteen years.

Years.	1840.	1851.	1868.
Ardeut spirits ...	29,216,260	30,163,933	29,407,499
Foreign wines ...	7,000,486	6,813,830	15,064,628
Ale and beer ...	570,799,196	618,625,188	896,533,416
	607,015,942	655,602,951	941,005,543

The population has increased only two millions during these twenty-eight years.

PERPETUAL PASTE.—A perpetual paste may be made by dissolving an ounce of alum in a quart of warm water. When cold, add as much flour as will make it of the consistency of cream; then stir into it half a teaspoonful of powdered rosin and two or three cloves. Boil it down, stirring all the time. It will keep for twelve months, and when dry may be softened with water.

HOUSEHOLD WEIGHTS AND MEASURES.—Wheat flour weighs one pound to a quart. Indian meal, one pound two ounces to a quart. Butter, when soft, one pound to a quart. Loaf sugar, broken, one pound to a quart. White sugar, powdered, one pound one ounce to a quart. Eggs, average size, ten to a pound.

QUANTITATIVE ANALYSIS.—A dentist in Philadelphia has traced out the career of 1,000 dentists, with this result: 163 died before they reached middle life, 643 attained fair success, 57 made fortunes, 27 died from intemperance and other vices; 96 failed entirely; and 3 committed suicide.

A mixture of resin and lard, when rubbed together, has the curious property of forming a liquid which is a valuable application to beets, rendering the leather soft and waterproof.

Mr. Robert Sinnickson, of Salem, New Jersey (U.S.), invites our opinion as to the advisability and prospects of success of a projected serial, to be called the *Moonly Voice*. Mr. S. states with charming candour that his ideas, which are something concerning a national soul-germ, were chiefly formed in a lunatic asylum. If we may be allowed to reply on behalf of the lunatics of this country, we may say that they are not gone quite far enough yet to give much hope of success in England. The editor of the *Lancet* could probably give a more authoritative opinion.

SULPHITE OF SODA PILLS.

Dr. Polli, who introduced the sulphites to the notice of the medical profession in certain blood diseases, recommends the following formula:—

Take powdered Sulphite of Soda ... 36 grains.
" Ginger 12 "
" Mucilage, q.s. for 12 pills.

Dose, one to three soon after eating. [These are given when the stomach is foul, and the food ferments and becomes putrescent. The sulphite of magnesia, Dr. P. says, is better for this purpose than sulphite of soda.] Sulphur obtained by decomposing precipitated sulphide of copper, called *brown sulphur*, is stated to be most active, and is a powerful remedy, says Dr. J. Hinson in an English

periodical, against gout and rheumatism.—*American Druggists' Circular.*

SULPHUR PILLS.

The following formulæ furnish a convenient and neat method of administering sulphur when this useful medicine is required to be given as an alterative in chronic rheumatism and certain diseases of the skin:—

1. Take Sulphur 42 grains.
Castile Soap 18 "

Mix and divide into 12 pills. One to 3 pills for a dose, morning and night.

2. Take Sulphur } of each ... 24 grains.
Acetate of potash }
Confection of roses, q.s. for 12 pills.

One to two twice a day in scorbutic and scrofulous patients, and when sulphur generally is indicated.

INODOROUS PAINT.—A composition for mixing with white-lead and other colours, to form a paint in lieu of linseed-oil, turpentine, and the usual driers, has lately been brought out. The advantages claimed for this vehicle are, it dries very quickly. In less than half an hour after application it is sufficiently dry and hard to receive another coat. It is perfectly inodorous. A room can be used the same day it is painted. It is peculiarly adapted for painting offices, counting-houses, stairs, ships' cabins, and all work where time is an object. It cleans readily, and is not affected by soap or alkalies. It is economical in use, though the composition is in itself necessarily, from the materials employed, dearer than linseed oil. In consequence of the body contained in the composition, three coats of paint mixed with it are equal to four of ordinary paint; and the great saving in the time always lost by workmen in going from one job to another, or waiting until such paint is dry, is more than sufficient compensation for the greater original cost. For example, a street-door, which requires the attendance of a workman on five several days to complete the painting and varnishing, can, by the use of this composition, be painted with four coats and varnished in one day. The material consists of methylated spirit, shellac, and castor-oil, and the composition is patented.

Heading a paragraph "Tempting Articles," *Punch* gives us the following:—The *Times* quotes the following pleasant paragraph:—"Breakfast delicacies.—According to the *Chemist and Druggist*, Americans are manufacturing golden syrup with sulphuric acid and starch. It is said to blacken the teeth, and chaw up the gizzard. From the same land of innocence we read of currant jelly being made out of old boots." This is bad enough, but there is worse to follow. The *Chemist and Druggist* has not revealed half of what it might have disclosed. We are reluctant to make those of our readers uncomfortable who are particular about what they eat and drink, but private advices from America speak of the following delicacies as being manufactured in large quantities, both for home consumption and importation into this and other Epicurean countries. Treacle from coal tar. Anchovy paste and sance from old fishing-tackle. Cayenne from rusty tenpenny nails. Preserved ginger from door-mats. Ketchup from old hats. Isinglass from shirt-fronts. Caviare from old Russia leather book bindings. Sponge-cake from flannel garments. Other novelties are in preparation, and will shortly be introduced into the market.

We have to acknowledge a communication from Messrs. Geo. W. Fox and Co., of City-road, Manchester, commenting on statements injurious to their interests, made at a meeting of the Liverpool Chemists' Association. We have already expressed an opinion that the Palatable Oils made by this firm were worthy of different treatment, and hope that Messrs. Fox will find our opinion generally coincided in.

THE *Grocer* very properly comments on the horrible system of connecting with new articles the names of some of the recent European fields of battle. Should any readers have it in their minds to introduce to their patrons a "Sedan perfume" or a "coeur de Metz," we join with our contemporary in asking them "to reflect for a moment, and ask themselves if there are not in this wide world subjects and ideas enough to form 'catch lines' for handbills and advertisements without making light use of the leading incidents of this terrible calamity, which, if dwelt upon seriously for one moment, are enough to make one's blood curdle."



[The following list has been compiled expressly for the CHEMIST AND DRUGGIST, by L. de Fontainemoreau, Patent Agent, 4, South-street, Finsbury, London; 10, Rue de la Fidélité, Paris; and 33, Rue des Minimes, Brussels.]

Provisional Protection for six months has been granted for the following:—

2478. J. B. Spence, of Manchester. Improvements in the manufacture of alum. Dated 14th Sept., 1870.
 3045. J. Hargreaves, of Appleton-within-Widnes, and T. Robinson, of Widnes, Lancaster. Improvements in the manufacture of sulphates of soda and potassa. Dated 21st Nov., 1870.
 3201. J. Macintosh, of North Bank, Regent's Park. Improvements in varnishes. Dated 6th Dec., 1870.
 3223. J. and M. Oldroyd, and J. Woodecock, and J. Coulter, all of Dewsbury, York. Improved means or machinery for indigo-blue dyeing. Dated 8th Dec., 1870.
 3225. J. C. Newburn, of London. Improvements in apparatus for injecting and ejecting fluids. Dated 8th Dec., 1870.
 3253. J. H. Johnson, of London. Improvements in the preservation of meat and other animal matters. Dated 12th Dec., 1870.
 3261. J. J. Coleman, of Glasgow. Improvements in treating certain mineral lubricating oils and paraffin. Dated 13th Dec., 1870.
 3269. F. L. H. Danchell, of Horwich, Lancaster. Improvements in apparatus for treating sewage matter and for filtering sewage and other water. Dated 14th Dec., 1870.
 3307. G. E. Marchisio, of Baker-street, Portman-square, and H. B. Price, and J. E. Hodgkin, both of Liverpool. Improvements in the process of extracting oil from olives or olive cakes, and in machinery to be employed therefor. Dated 19th Dec., 1870.
 3310. N. M. Henderson, of Mid Calder, Midlothian, N.B. Improvements in apparatus for cooling paraffin solutions or other solidifiable or partially solidifiable liquids. Dated 19th Dec., 1870.
 3321. L. Mariotti, of Suisse, Lucerne, Switzerland. Improvements in the method or process of preserving meat and fish. Dated 20th Dec., 1870.
 3324. R. Tooth, of Hatcham, Kent. Improvements in the mode of condensing saccharine juices, and in apparatus to be employed therein, which apparatus is applicable to evaporating other liquids. Dated 20th Dec., 1870.
 3349. W. Spence, of London. Improvements in bedsteads for invalids. Dated 22nd Dec., 1870.
 3367. J. Gamgee, of Great Winchester-street-buildings, and W. II. Maitland, of Thurloe-square. Improvements in medicating cotton and other fibres for sanitary and surgical purposes, and in machinery employed therein. Dated 24th Dec., 1870.
 3373. G. Haslington, of London. An improved mode of and composition for preserving fruit. Dated 27th Dec., 1870.
 3394. G. Glover, of Marylebone. An improved invalid bedstead. Dated 30th Dec., 1870.
 20. II. W. Brand, of Villa-road, Brixton-road. Improvements in the preservation of milk, and in the preparation of a compound of meat extract and preserved milk. Dated 5th January, 1871.
 22. R. Irvine, of Leith, N.B. Improvements in the production of phosphates to be used as fertilizing agents. Dated 5th January, 1871.
 46. W. H. Furlonge, of Hammersmith, and J. D. Churchill, of Holloway. Improvements in furnaces or apparatus for the manufacture of alkalies, and for other purposes. Dated 9th January, 1871.

Letters Patent have been issued for the following:—

1903. E. T. Hughes, of London. Improvements in the manufacture of caustic soda. Dated 5th July, 1870.
 2046. J. E. Duyck, of Glasgow. Improvements in treating mineral oils. Dated 20th July, 1870.
 2095. H. Brooks, of Cumberland-market, Regent's-park. Improvements in the manufacture of stoppers for bottles and other vessels, and in the means employed in such manufacture. Dated 23rd July, 1870.
 2145. W. A. Gibbs, of Gilwell-park, Essex. Improvements in drying apparatus for drying agricultural, animal, and chemical and commercial products. Dated 1st August, 1870.
 2653. C. F. Kirkman, of Islington. Improvements in treating sewage, and in the apparatus and means employed therein. Dated 6th October, 1870.
 2875. A. C. and J. Sterry, both of the Rotherhithe New-road. Improvements in purifying hydrocarbon and rosin oils. Dated 1st November, 1870.
 2891. R. Recco, of Llandilo, Carmarthen. Improvements in apparatus for cooling and refrigerating liquids, manufacturing ice, and obtaining ammoniacal solution for the same and other purposes. Dated 2nd November, 1870.
 2892. U. K. Mayo, of Massachusetts, U.S. Improvements in the preparation of artificial teeth, and in the manufacture of mouth-plates or supports therefor. Dated 2nd November, 1870.
 3182. G. T. Bonsfield, of London. Improvements in the manufacture of resin oil. Dated 3rd December, 1870.

Specifications published during the month. Postage Id. each extra:—
 1870.

1315. E. Guenin. Mustard and other plasters. 10d.
 1394. G. W. Hemans. Revivifying spirit sulphuric acid. 6d.
 1422. A. Pac c. Drinking vessel for invalids. 4d.

1411. J. H. Player. Manufacture of phosphorus. 8d.
 1414. J. Agnew. Cod-liver oil jelly. 4d.
 1418. F. J. Cleaver. Moulding and stamping soap, &c. 2s. 2d.
 1447. R. Oxland. Manufacture of sulphuric acid. 4d.
 1452. J. Baird. Treating vegetable oils. 4d.
 1463. J. J. Denonil. Enveloping medicinal and other liquids. 4d.
 1479. F. Milnes. Apparatus for exercising the human frame. 4d.
 1499. II. B. Brook. Medicinal compound. 4d.
 1546. II. Baudy. Vessels for manufacturing nitrous oxide gas, &c. 8d.
 1559. II. Bessemer. Construction of steam ships for the prevention of seasickness. Is.
 1562. A. Manbré. Converting cereal and vegetable substances into saccharine matter, &c. 10d.
 1583. L. Gardner and T. Rushby. Pill-making machines. 4d.
 1586. S. Cobné. Disinfecting and cleansing powder. 4d.
 1593. C. D. Abel. Manufacture of phosphorus. 4d.
 1610. J. F. Rogers. Decoctioning fruits and vegetables. 4d.
 1639. L. Rose. Stopper and bottle. 4d.
 1660. G. H. Johnson. Producing light from heavy hydrocarbons. 10d.
 1676. T. Spence. Manufacture of alum, &c. 4d.
 1681. W. Pelson. Treating farinaceous substances. 4d.
 1697. E. T. Hughes. Preparing carbonate of soda, &c. 4d.
 1704. A. Ford. Fomenting pad. 4d.
 1706. B. G. Sloper. Treating sewage. 4d.
 1710. F. Dupny. Anti-hemorrhoidal plate. 4d.
 1746. T. J. Smith. Caustic soda and potash. 4d.
 1766. B. J. B. Mills. Soap. 10d.
 1801. S. F. Van Choate. Distilling alcoholic liquors. 4d.
 2303. C. Morfit. Manufacture of superphosphate of lime. 4d.
 2762. W. R. Lake. Treating paraffine oil. 4d.

Varia.

THE LEECH TRADE.

ONE of the trades carried on in the Landes, South of Bordeaux, in France, is that of propagating leeches in the meres near the bay. Formerly the custom was to use miserable worn-out horses; but these poor animals were found by the propagator to wear out too soon—the veins opened by the leeches did not heal; and so the life's blood could not be renewed. Now, the cow as to do duty as nurse to the young annelides. Frightened, haggard, but resigned, the animal submits with a stupid kind of astonishment to the attacks of clusters of leeches hanging on its legs; and when the moment of utter exhaustion comes she is sent off to her pastures to renew life, and furnish a fresh repast. Two weeks suffice for each process, alternately carried on, until death puts an end to being eaten in detail. The owner of about eight acres of marsh supplies yearly two hundred cows for the nourishment of eight hundred thousand leeches: he buys the animal for about two pounds, and sells the carcass for sixteen shillings. The ass is sometimes employed, but it proves to be less resigned than the more patient cow: it kicks, prances, and tries to bite; and when at length it falls into the water under the storm of its numerous enemies, it becomes mad with terror. That this culture of leeches forms an important branch of trade to the inhabitants of the Bay of Arcachon, may be believed when it is known that a million and a half of leeches are annually exported to Bordeaux.

DIAMOND CUT DIAMOND.

Recent New York journals give an account of the capture of some of the swindling firms who have been deriving large profits from offering to send supplies of forged notes at the rate of 100 dols. for every 5 dols. of cash remitted to them. Their offices having been invaded by the police, it was found from their books that they had sometimes made profits at the rate of £800 per day. It was their custom to obtain from all parts of the country the names of the most likely dupes, and to tempt them with circulars, stating that the forgeries were such as to defy detection, that the orders for them, accompanied by a remittance, were to be addressed to the firm, as if for so many hundred cigars, and that the required quantity would forthwith be forwarded by express. In return, nothing was sent but boxes of rubbish, and the victims were obliged to remain quiet, or avow their own criminality. Many of the letters of these parties were found on the premises of the firms, and are published, with the names in full, by the New York Sun. Among them is one from an agent of an express company, offering to aid the swindlers in their operations; another is from a writer who states himself to be a member of the Tennessee Legislature, who is anxious to be a customer; another is from a resident in the State of Georgia, who is confident he can pass off a

great many among the negroes; another is from one of the keepers in a State prison, and another is from an "attorney and counsellor at law" in the State of Georgia, who describes himself as a member of Congress, and consequently an "honourable," and who gives a reference to a New York mercantile house. The business was carried on in the most regular manner; there was a "correspondence department," a "mailing department," etc., and in one of the establishments at the time of seizure there were sacks containing, according to estimate, about 10,000 letters from persons in all parts of the Union desirous of this method of making their fortune. Within the last few months, firms of a similar description have addressed circulars from New York to this side, offering to sell sovereigns made of aluminium from a vein discovered in the Pecos Valley in the Rocky Mountains, of which they had obtained exclusive possession. These would be found precisely similar to gold in every respect, except that the aluminium, being one-twelfth less in weight, they were obliged to be made a little thicker than the genuine coin. Their manufacture was superintended by a person who worked in the British Mint for eighteen years, and they could be offered at the price of £2 for twenty sovereigns, or, if a quantity were taken, at something less. Orders were to be accompanied by a remittance, which must be in Bank of England notes, and were to be written as if for so many pounds of tobacco. Nothing appears yet to have been divulged as to the success of the experiment here; but if any dupes have been found, there will now be a great probability of their names and addresses being published to the world.



WE agree with her Majesty that "the trade and industry of the country may, though with certain drawbacks, be considered satisfactory." Satisfactory we think a mild word to express the exceptionally prosperous condition of this country, made all the more conspicuous by the tremendous comparison which inevitably forces itself upon every mind. The hopes and fears, the happiness or misery, the advancement or retrogression of Germany and France lie trembling in the balance as we write. We in England are utterly unable to realise the blessings of these few days of rest from war, the prelude we earnestly hope to a lasting peace, which suffering France now enjoys; and yet there are some among us who would gladly drag our Government into a war, and our people into the same misery, merely that England might show that she had not declined in valour since "the brave days of old." England will assuredly show this if she is ever called upon by duty, honour, or patriotism to fight, but surely it might have been expected that lessons of peace rather than lessons of war would have been most deeply impressed on the minds of all the on-lookers of the gigantic struggle which has taken place in Europe during the past six months. We hope our Parliamentary session just opened will recognise, in spite of some frothy speeches which are sure to be delivered, that England's greatness and power is not dependent on what the mobs of other lands may say or think of us, but on the dignified manner in which our country bears itself.

The chemical markets open the year quite buoyantly. The manufacturers are full of orders, and prices are firm all round. Saltpetre alone is on the decline, a matter for congratulation. Soda is advancing, and a good foreign demand is reported. Citric and Tartaric Acids, Alum and Bleaching Powder are all quoted higher, and if the armistice should result favourably there seems every reason to hope for a continued course of prosperity for those engaged in the manufacturing of chemicals. The extraordinary rise in the price of Quicksilver is not to be accounted for by any of the ordinary methods of explanation. The supply is not materially contracted, nor is the demand excessively augmented. Neither the war nor the weather are responsible in this instance; chemists and druggists are perhaps hardly aware to what a respectable source is to be traced this inroad on their profits.

The Rothschild firm have the entire control of the Quicksilver market. They contract with the Spanish Government probably on pretty much their own terms for all that comes to England, and it is likely enough that if competition should arise on the part of Austria or of the one of two South American States from whence alone it can come, the influence of this mighty firm would be quite powerful enough to nip it in the bud. Possibly certain other of Messrs. Rothschild's speculations may not have seemed sufficiently remunerative to them of late; all they need to do, therefore, is to instruct their "Mercury" clerk to wind up his department a bit closer, and instantly an extra fraction from all the sales of white precipitate throughout the country flies to their treasury.

In drugs all sales are, as heretofore, limited to those actually required. When peace is proclaimed it is probable that more liveliness will be exhibited. Quinine, however, has advanced considerably, so also has Balsam of Copaiba, both in consequence of foreign demand. Other drugs are in almost every instance steady, or rather, if our readers will grasp the distinction, firm.

Shellac is again the subject of speculation, and is advancing. The demand for China Gall, too, has become active, and a rapid advance has taken place; but the market is now steady again. The quarterly Indigo sales commenced on Monday last, the quantity declared for auction being 9,660 chests. It is anticipated that good prices will be realised. Dyewoods, in a few instances, have fallen in price, and "buying in" has been the usual end of the bulk of them submitted to auction.

OILS. —The market for LINSEED has exhibited more firmness, and the price on the spot here has advanced to £31. Forward sales have been effected at £31 2s. 6d. for March, £31 10s. February-April, £32 April-June, and at £32 10s. March to June. Hull has improved, spot £30 15s., month £31, and February-April £31 10s. RAPE has continued dull, £46 has been accepted for English brown on the spot, and the same price for February and March. May-August quoted £45 10s., and September-December, £44 10s. to £45, Refined £48 to £48 10s., Foreign £50 to £51 10s. COTTON OIL has been less active. Crude has advanced to £28 10s to £29, Refined £33 to £34 spot, and £35 March-June, while business has been done in Hull up to £34 special make on the spot, and at £34 10s. May-April. OLIVE OILS have been in more request, and prices have an upward tendency. 100 tuns Mogador found buyers at £47 15s. to £48, chiefly at the latter price. 10 tuns Tunis sold at £49. A cargo of Catanzaro sold at £44 f. o. b., one of Brindisi at £46 10s e. and f., one of Candia at £46 e. f. and i., and a Taranto cargo is reported at £45 f. o. b. COCOANUT has continued to attract attention, and a good quantity has changed hands, including about 200 tons Cochin at £45 to £47, and 100 tons Ceylon at £40 to £40 10s. in pipes, up to £41 in hogsheads on the spot, and 50 tons for arrival at £40 10s., and a further sale is mentioned at £41. Of 231 casks offered by auction 155 casks sold at £40 to £40 5s. for pipes, and £40 10s. to £40 15s for hogsheads. 186 casks Cochin were withdrawn. A limited amount of business has been done in fine Lagos PALM, at £38 10s. to £39 : of 867 casks offered by auction 226 casks sold, ordinary coast to good Acea £30 to £35 5s., inferior £29 5s. to £29 10s., the remainder withdrawn or bought in, fine Lagos £39, middling coast to good Acea £32 10s. to £35 5s. Crude SUGAR has met a good demand, and a large business has been done at £83 to £83 10s., and 7 tons sold by auction at £83 15s., thick £83. Small sales of WHALE, of second quality, have taken place at £35, and pale SEAL at £36 10s. to £37. Cod offers at £35 10s. At auction 40 tuns WHALE bought in, chiefly at £32 for neck, two lots £33; 167 barrels, the produce of white whales, also bought in, double compass £36. TURPENTINE has advanced to 37s. for American, and to 36s. 6d. to 36s. 9d. for French on the spot; 200 barrels of the former for the first fourteen days in March sold at 37s., and 50 tons French to arrive at 36s. 6d., and further business has been done at 36s. 9d. PETROLEUM. —The market has been quiet, and less firm, transactions have been limited, and 1s. 6d. has been taken for S. W. American refined, of high test, and 1s. 5*½*d. for lower ditto, and floating cargoes for Continental ports are offering at 1s. 6d., without finding buyers. Stock 29,838 barrels, and the deliveries last week were 2,805 barrels, against 7,837 and 1,807 barrels respectively same time last year. Retail sales of NAPHTHA have been made at 1s. 6d.

Monthly Price Current.

The prices quoted in the following list are those actually obtained in Mincing-lane for articles sold in bulk. Our Retail Subscribers must not expect to purchase at these market prices, but they may draw from them useful conclusions respecting the prices at which articles are offered by the Wholesale Firms.]

CHEMICALS.

	1871.			1870.			
ACIDS—	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	
Acetic	per lb.	0 4	to	0 0	0 4	to	0 0
Citric	per lb.	2 9	..	0 0	2 4	..	0 0
Hydrochlor.	per cwt	4 0	..	7 0	4 0	..	7 0
Nitric	per lb.	0 5	..	0 5	0 5	..	0 5
Oxalic .....	..	0 8	..	0 0	0 7	..	0 0
Sulphuric .....	..	0 03	..	0 1	0 04	..	0 1
Tartaric crystal .....	..	1 4	..	0 0	1 2	..	0 0
powdered .....	..	1 4	..	1 4	1 2	..	1 2
ANTIMONY	per ton	210 0	..	280 0	320 0	..	360 0
erude	per cwt	36 0	..	38 0	36 0	..	0 0
regulus .....	..	52 0	..	0 0	65 0	..	68 0
star .....	..	0 0	..	0 0	65 0	..	68 0
ARSENIC, lump .....	..	15 6	..	16 0	16 0	..	16 6
powder .....	..	6 9	..	7 3	7 3	..	7 6
BRIMSTONE, rough	per ton	160 0	..	0 0	160 0	..	0 0
roll	per cwt	11 0	..	0 0	11 0	..	0 0
flour .....	..	12 0	..	13 0	11 0	..	0 0
IODINE, dry	per oz.	0 103	..	0 103	0 9	..	0 9
IVORY BLACK, dry	per cwt	0 0	..	0 0	0 0	..	0 0
MAGNESIA, calcined	per lb.	1 2	..	0 0	1 2	..	0 0
MERCURY	per bottle	240 0	..	0 0	137 0	..	138 0
MINUM, red	per cwt	21 0	..	0 0	20 9	..	21 0
orange .....	..	31 6	..	0 0	31 6	..	32 6
PRECIPITATE, red	per lb.	3 9	..	0 0	2 6	..	0 0
white .....	..	3 8	..	0 0	2 5	..	0 0
PRUSSIAN BLUE .....	..	0 0	..	0 0	0 0	..	0 0
SALTS—							
Alum	per ton	140 0	..	150 0	145 0	..	155 0
powder .....	..	150 0	..	160 0	165 0	..	170 0
Ammonia:							
Carbonate	per lb.	0 5	..	0 6	0 5	..	0 6
Hydrochlorate, erude,							
white	per ton	460 0	..	560 0	480 0	..	560 0
British (see Sal Ammoniac)							
Sulphate	per ton	325 0	..	340 0	330 0	..	350 0
Argol, Cape	per cwt	57 0	..	71 0	60 0	..	75 0
France .....	..	0 0	..	0 0	45 0	..	58 0
Oporto, red .....	..	22 0	..	24 0	22 0	..	24 0
Sicily .....	..	0 0	..	0 0	32 0	..	40 0
Naples, white .....	..	9 0	..	0 0	0 0	..	0 0
Florence, white .....	..	0 0	..	0 0	0 0	..	0 0
red .....	..	0 0	..	0 0	0 0	..	0 0
Ashes (see Potash and Soda)							
Bleaching powd.	per cwt.	11 6	..	0 0	8 6	..	8 9
Borax, crude .....	..	25 0	..	40 0	25 0	..	35 0
(Tincal) .....	..	45 0	..	60 0	55 0	..	65 0
British refund. ....	..	68 0	..	70 0	69 0	..	70 0
Calomel	per lb.	3 7	..	0 0	2 5	..	0 0
Copper:							
Sulphate	per cwt.	23 0	..	25 0	23 6	..	24 0
Copperas, green	per ton	50 0	..	60 0	52 6	..	60 0
Corrosive Sublimate	p. lb.	2 11	..	0 0	1 11	..	0 0
Cr. Tartar, French, p. cwt.	..	88 0	..	90 0	82 0	..	0 0
Venetian grey .....	..	90 0	..	96 0	83 0	..	0 0
brown .....	..	0 0	..	0 0	0 0	..	0 0
Epsom Salts	per cwt.	6 0	..	7 0	6 0	..	7 0
Glauber Salts ....	..	4 6	..	6 0	4 6	..	6 0
Lime:							
Acetate, white, per cwt.	..	12 6	..	23 0	12 6	..	23 0
Magnesia: Carbonate .....	..	42 6	..	0 0	42 6	..	0 0
Potash:							
Bichromate	per lb.	0 5	..	0 5	0 5	..	0 5
Carbonate:							
Potashes, Canada, 1st sort	per cwt.	30 0	..	33 6	31 9	..	32 0
Pearlashes, Canada, 1st sort	per cwt.	38 0	..	42 0	32 9	..	33 0
Chlorate	per lb.	0 11	..	0 0	0 10	..	0 0
Prussiate	per lb.	1 0	..	0 0	1 0	..	0 0
red .....	..	1 9	..	1 10	1 9	..	1 10
Tartrate (see Argol and Cream of Tartar)							
Potassium:							
Chloride	per cwt.	13 0	..	0 0	8 0	..	0 0
Iodide	per lb.	14 6	..	15 0	12 0	..	0 0
Quinine:							
Sulphate, British, in bottles	per oz.	8 0	..	0 0	5 10	..	6 0
Sulphate, French .....	..	8 0	..	0 0	5 7	..	0 0
Sal Acetos	per lb.	0 10	..	0 0	0 10	..	0 0
Sal Ammoniac, Brit. cwt.	..	41 0	..	42 6	39 0	..	40 0
Sulphate:							
Bengal, 6 per cent. or under	per cwt.	29 6	..	30 0	22 9	..	23 3
Bengal, over 6 per cent. per cwt.	..	28 0	..	29 3	21 0	..	22 6
Madras .....	..	0 0	..	0 0	20 0	..	21 0
Bomb. & Kurrachee p. c. t. ....	..	0 0	..	0 0	0 0	..	0 0
European .....	..	0 0	..	0 0	25 0	..	26 0
British, refined .....	..	32 0	..	32 6	25 6	..	26 0
Soda: Bicarbonate, p. cwt.	..	10 6	..	0 0	9 6	..	9 9
Carbonate:							
Soda Ash	per deg.	0 1	..	0 2	0 1	..	0 0
Soda Crystals per ton	..	87 0	..	90 0	77 6	..	0 0
Hyposulphite	per cwt.	18 0	..	0 0	13 0	..	14 0

DRUGS.

	1871.			1870.			
Soda:	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	
Nitrate	per cwt.	16 0	..	16 6	16 0	..	16 3
SUGAR OF LEAD, White, cwt.	..	39 0	..	40 0	39 0	..	40 0
Brown .....	..	26 0	..	28 0	26 0	..	28 0
SULPHUR (see Brimstone)							
VERDIGRIS	per cwt.	1 0	..	1 2	1 0	..	1 2
VERMILION, English	per lb.	4 2	..	4 4	2 4	..	2 6
China .....	..	3 6	..	0 0	2 10	..	0 0

	1871.			1870.			
BALSAMS—	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	
Canada	per lb.	0 10	..	210 0	60 0	..	180 0
Capivi .....	..	120 0	..	315 0	100 0	..	220 0
Cape, good .....	..	24 0	..	27 0	28 0	..	30 0
Inferior .....	..	17 0	..	23 0	17 0	..	27 0
Barbadoes .....	..	70 0	..	200 0	89 0	..	220 0
AMBERGRIS, grey	oz.	25 0	..	28 0	27 6	..	30 0

	1871.			1870.			
BARKS—	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	
Canella alba	per cwt.	12 6	..	30 0	20 0	..	34 0
Cascarilla .....	..	18 0	..	32 0	22 0	..	34 0
Peru, crown & grey	per lb.	0 10	..	2 8	0 10	..	2 3
Calisaya, flat .....	..	8 2	..	3 11	3 9	..	3 11
quill .....	..	8 2	..	3 10	3 9	..	3 10
Carthagena .....	..	0 10	..	1 10	1 1	..	1 11
Pitayo .....	..	0 10	..	1 6	0 6	..	1 5
Red .....	..	2 0	..	9 0	1 6	..	7 0
BUCHO Leaves .....	..	0 5	..	0 8	0 8	..	0 6
CAMPHOR, China	per cwt.	75 0	..	76 0	82 6	..	85 0
Japan .....	..	77 6	..	80 0	85 0	..	87 6
Rcfn Eng. per lb.	..	1 2	..	1 3	1 3	..	0 0
CANTHARIDES .....	..	5 6	..	0 0	3 0	..	3 2
CHAMOMILE FLOWERS p. cwt.	..	40 0	..	65 0	40 0	..	72 6
CASTOREUM	per lb.	3 0	..	30 0	4 0	..	32 0
DRAGON's BLOOD, I. p. cwt.	..	90 0	..	200 0	100 0	..	200 0

	1871.			1870.			
FRUITS AND SEEDS (see also Seeds and Spices)	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	
Anise, China Star pr cwt.	110 0	..	120 0	112 6	..	115 0	
German, &c. .....	..	36 0	..	38 0	25 0	..	38 0
Beans, Tonquin	per lb.	0 9	..	1 4	1 0	..	1 6
Cardamoms, Malabar							
good .....	..	11 6	..	12 3	7 10	..	8 6
inferior .....	..	10 0	..	11 0	5 9	..	7 0
Madras .....	..	7 0	..	11 0	4 6	..	8 4
Ceylon .....	..	2 9	..	3 0	2 6	..	2 10
Cassia Fistula	per cwt.	12 0	..	30 0	16 0	..	35 0
Castor Seeds .....	..	10 0	..	12 0	10 6	..	12 0
Cocculus Indiens .....	..	12 6	..	13 6	21 0	..	22 0
Colocynth, apple	per lb.	0 3	..	0 6	0 4	..	0 8
Croton Seeds	per cwt.	80 0	..	87 0	46 0	..	55 0
Cubebes .....	..	23 6	..	26 0	32 0	..	35 0
Cummu .....	..</td						

	1871.	1870.		1871.	1870.
Essential Oils, continued:—	s. d.	s. d.	Oils, continued:—	£ s.	£ s.
Citronelle	per oz.	0 2 ..	0 2 ¹ ..	35 10 ..	36 0 ..
fine	0 2 ¹ ..	0 0 ..	36 0 ..	39 0 ..	
Clove	per lb.	2 5 ..	2 6 ..	37 0 ..	0 0 ..
Juniper	"	1 9 ..	2 0 ..	37 0 ..	38 0 ..
Lavender	"	3 0 ..	4 3 ..	33 0 ..	0 0 ..
Lemon	"	5 0 ..	9 6 ..	29 0 ..	32 0 ..
Lemongrass	per oz.	0 2 ¹ ..	0 3 ..	50 0 ..	60 0 ..
Neroli	"	0 5 ..	0 6 ..	48 0 ..	59 0 ..
Nutmeg	"	0 4 ..	0 7 ¹ ..	48 0 ..	55 0 ..
Orange	per lb.	5 0 ..	7 0 ..	48 0 ..	58 0 ..
Otto of Roses	per oz.	12 0 ..	20 0 ..	47 10 ..	58 0 ..
Patchouli	"	3 0 ..	0 0 ..	45 10 ..	0 0 ..
Peppermint:—				COCOANUT, Cochin ..	42 10 ..
American	per lb.	15 0 ..	16 0 ..	per ton	42 10 ..
English	"	33 0 ..	34 0 ..	45 10 ..	42 10 ..
Rosemary	"	1 9 ..	2 0 ..	49 0 ..	35 0 ..
Sassafras	"	3 0 ..	0 0 ..	33 0 ..	0 0 ..
Spearmint	"	4 0 ..	16 0 ..	30 15 ..	31 0 ..
Thyme	"	1 10 ..	2 0 ..	48 0 ..	44 0 ..
Mace, expressed	per oz.	0 1 ¹ ..	0 3 ..	46 5 ..	0 0 ..
Opium, Turkey	per lb.	27 0 ..	29 0 ..	50 0 ..	51 10 ..
inferior	"	15 0 ..	25 0 ..	47 10 ..	45 10 ..
Quassia (bitterwood)	per ton	60 0 ..	70 0 ..	47 10 ..	42 0 ..
RHUBARB, China, good and				Ceylon ..	40 0 ..
fine	per lb.	2 6 ..	6 0 ..	49 0 ..	37 10 ..
Good, mid. to ord.	"	0 4 ..	2 3 ..	33 0 ..	35 0 ..
Dutch trimmed	"	0 0 ..	0 0 ..	30 15 ..	31 0 ..
Russian	"	0 0 ..	0 0 ..	30 15 ..	31 0 ..
ROOTS—Calumba	per cwt.	27 0 ..	42 0 ..	30 15 ..	31 0 ..
China	"	23 0 ..	25 0 ..	30 0 ..	30 0 ..
Galangal	"	15 0 ..	16 0 ..	40 0 ..	40 0 ..
Gentian	"	23 0 ..	0 0 ..	40 0 ..	40 0 ..
Helleboro	"	22 0 ..	30 0 ..	40 0 ..	40 0 ..
Orris	"	61 0 ..	62 0 ..	44 0 ..	44 0 ..
Pellitory	"	58 0 ..	60 0 ..	44 0 ..	44 0 ..
Pink	per lb.	0 7 ..	1 0 ..	44 0 ..	44 0 ..
Rhatany	"	0 5 ..	0 11 ..	44 0 ..	44 0 ..
Seneka	"	4 6 ..	5 0 ..	44 0 ..	44 0 ..
Snake	"	1 0 ..	0 0 ..	44 0 ..	44 0 ..
SAFFRON, Spanish	"	33 0 ..	40 0 ..	44 0 ..	44 0 ..
SALEP	per cwt.	110 0 ..	0 0 ..	44 0 ..	44 0 ..
SARSAVAPILLA, Lima per lb.				SEEDS.	
Paru	"	1 0 ..	1 3 ..	CANARY	per qr.
Honduras	"	1 1 ..	1 8 ..	48 0 ..	60 0 ..
Jamaica	"	1 7 ..	3 2 ..	CARAWAY, English ..	per cwt.
SASSAFRAS	per cwt.	0 0 ..	0 0 ..	40 0 ..	48 0 ..
SCAMMONY, Virgin	per lb.	25 0 ..	29 0 ..	40 0 ..	40 0 ..
second & ordinary	"	10 0 ..	23 0 ..	40 0 ..	40 0 ..
SENNA, Bombay	"	0 3 ¹ ..	0 5 ¹ ..	40 0 ..	40 0 ..
Tinnevelly	"	0 3 ¹ ..	1 6 ..	40 0 ..	40 0 ..
Alexandria	"	0 4 ¹ ..	1 7 ..	40 0 ..	40 0 ..
SPERMACETI, refined	"	1 6 ..	1 7 ..	40 0 ..	40 0 ..
American	"	1 3 ..	1 4 ..	40 0 ..	40 0 ..
SQUILL	"	0 1 ..	0 2 ..	40 0 ..	40 0 ..
GUMS.				SEEDS.	
AMMONIACI drop	per cwt.	80 0 ..	100 0 ..	CANARY	per qr.
lump	"	50 0 ..	75 0 ..	48 0 ..	50 0 ..
ANIMI, fine washed	"	260 0 ..	320 0 ..	CARAWAY, English ..	per cwt.
boldscraped	"	200 0 ..	250 0 ..	40 0 ..	48 0 ..
sorts	"	160 0 ..	200 0 ..	40 0 ..	52 0 ..
dark	"	75 0 ..	100 0 ..	40 0 ..	40 0 ..
ARABIC, E. I., fine				CORIANDER	per cwt.
pale picked	"	62 0 ..	70 0 ..	40 0 ..	40 0 ..
sorts, gd. to fin.	"	52 0 ..	61 0 ..	40 0 ..	40 0 ..
garblings	"	25 0 ..	45 0 ..	40 0 ..	40 0 ..
TURKEY, pick. gd. to fin.	"	160 0 ..	200 0 ..	40 0 ..	40 0 ..
second & inf.	"	85 0 ..	155 0 ..	40 0 ..	40 0 ..
in sorts	"	70 0 ..	90 0 ..	40 0 ..	40 0 ..
Gedda	"	38 0 ..	44 0 ..	40 0 ..	40 0 ..
BARBARY, white	"	65 0 ..	70 0 ..	40 0 ..	40 0 ..
brown	"	55 0 ..	57 6 ..	40 0 ..	40 0 ..
AUSTRALIAN	"	18 0 ..	40 0 ..	40 0 ..	40 0 ..
ASSAFETIDA, com.to gd.				CINNAMON, Ceylon	per cwt.
1st qual.	"	30 0 ..	90 0 ..	40 0 ..	40 0 ..
BENJAMIN, 1st qual.	"	160 0 ..	400 0 ..	40 0 ..	40 0 ..
2nd	"	140 0 ..	210 0 ..	40 0 ..	40 0 ..
3rd	"	40 0 ..	85 0 ..	40 0 ..	40 0 ..
COPAL, Angola red	"	75 0 ..	140 0 ..	40 0 ..	40 0 ..
Benguela	"	70 0 ..	135 0 ..	40 0 ..	40 0 ..
Sierra Leone	per lb.	0 3 ..	1 1 ..	40 0 ..	40 0 ..
Manilla	per cwt.	25 0 ..	42 0 ..	40 0 ..	40 0 ..
DAMMAR, pale	"	52 6 ..	57 0 ..	40 0 ..	40 0 ..
EPIHORIUM	"	13 0 ..	14 0 ..	40 0 ..	40 0 ..
GALBANUM	"	200 0 ..	260 0 ..	40 0 ..	40 0 ..
GAMBOGA, pkd. pipo	"	230 0 ..	260 0 ..	40 0 ..	40 0 ..
GUAIACUM	per lb.	0 9 ..	2 7 ..	40 0 ..	40 0 ..
KINO	per cwt.	60 0 ..	100 0 ..	40 0 ..	40 0 ..
KOWRIE, rough	"	25 0 ..	35 0 ..	40 0 ..	40 0 ..
scrapped	"	36 0 ..	90 0 ..	40 0 ..	40 0 ..
MASTIC, picked	per lb.	6 0 ..	6 6 ..	40 0 ..	40 0 ..
MYRRH, gd. & fine per cwt.				COCHINEAL—	
sorts	"	120 0 ..	160 0 ..	40 0 ..	40 0 ..
80 0 ..		115 0 ..	180 0 ..	40 0 ..	40 0 ..
OLIBANUM, p. sorts	"	77 6 ..	80 0 ..	40 0 ..	40 0 ..
amber & ylw.	"	70 0 ..	75 0 ..	40 0 ..	40 0 ..
garblings	"	19 6 ..	44 0 ..	40 0 ..	40 0 ..
SENECAL	per cwt.	70 0 ..	90 0 ..	40 0 ..	40 0 ..
SANDARAC	"	55 0 ..	111 0 ..	40 0 ..	40 0 ..
THUS	"	13 0 ..	14 0 ..	40 0 ..	40 0 ..
TRAGACANTH, leaf	"	220 0 ..	380 0 ..	40 0 ..	40 0 ..
in sorts	"	115 0 ..	210 0 ..	40 0 ..	40 0 ..
OILS.				PUMICE STONE	per ton
SEAL, pale	per tun	£36 10 ..	0 0 ..	120 0 ..	120 0 ..
yellow to tinged	"	33 0 ..	36 0 ..	150 0 ..	150 0 ..
brown	"	31 0 ..	0 0 ..	120 0 ..	120 0 ..
SPERM, body	"	82 0 ..	0 0 ..	35 0 ..	35 0 ..
headmatter	"	81 0 ..	82 0 ..	35 0 ..	35 0 ..

